

1                   IN THE UNITED STATES COURT OF FEDERAL CLAIMS

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4   IN RE:   UPSTREAM ADDICKS AND           ) Master Docket No.

5   BARKER (TEXAS) FLOOD-CONTROL        ) 17-9001L

6   RESERVOIRS.                                )

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10                               Courtroom 11B

11                   BOB CASEY UNITED STATES COURTHOUSE

12                               515 Rusk Street

13                               Houston, Texas 77002

14                               Wednesday, May 15, 2019

15                               8:29 a.m.

16                               Trial Volume 8

17

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19                   BEFORE:   THE HONORABLE CHARLES F. LETTOW

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25   REPORTED BY:   KRISTY L. CLARK, RPR

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Trial

Upstream Addicks and Barker (Texas) Flood-Control Reservoirs

5/15/2019

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Upstream Addicks and Barker (Texas) Flood-Control Reservoirs

5/15/2019

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Upstream Addicks and Barker (Texas) Flood-Control Reservoirs

5/15/2019

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5/15/2019

1 APPEARANCES (CONTINUED):

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1 APPEARANCES (CONTINUED) :

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## 1 I N D E X

2	Witness:	Direct:	Cross:	Redirect:	Recross:	VDire:
3	East	2171				
4	Deal	2183/2203	2213	2240	2247	2193/2204
5		2209				2206
6	Hansmann	2265	2303	2314		
7	Asche	2316	2326	2342/2348	2344	
8	Nakagaki	2350	2374	2383		
9	Fitzgerald	2384	2448	2469	2470	
10	Galloway	2472/2535				2498

## 11 E X H I B I T S

12	Number:	Marked:	Admitted:
13	Joint:		
14	54		2401
15	60		2404
16	88		2407
17	146		2429
18	266		2295
19	267		2295
20	268		2295
21	269		2295
22	271		2298
23	272		2298
24	273		2298
25	274		2298

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E X H I B I T S (Continued)			
	Number:	Marked:	Admitted:
1			
2			
3	276		2296
4	277		2296
5	278		2296
6	279		2296
7	280		2301
8	281		2301
9	282		2301
10	283		2363
11	284		2364
12	285		2365
13	286		2360
14	287		2366
15	288		2367
16	289		2368
17	Plaintiffs':		
18	138		2175
19	139		2176
20	2205		2250
21	Defendant's:		
22	42		2285
23	194		2416
24	340		2433
25	360		2437



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	E X H I B I T S (Continued)		
	Number:	Marked:	Admitted:
1			
2			
3	384		2439
4	396		2442
5	415		2443
6	427		2445
7	698		2282
8	741		2271
9	744		2271
10	745		2271
11	747		2271
12	749		2290
13	752		2290
14	753		2290
15	754		2290
16	756		2288
17	757		2288
18	758		2288
19	759		2288
20	806		2361
21	807		2362
22	815		2369
23	816		2372
24	817		2371
25	818		2373

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1 P R O C E E D I N G S

2 \* \* \* \* \*

3 (Proceedings called to order, 8:29 a.m.)

4 THE CLERK: All rise. The United States  
5 Court of Federal Claims now in session, Honorable  
6 Charles F. Lettow presiding.

7 THE COURT: Please be seated. Good morning.

8 IN UNISON: Good morning.

9 THE COURT: Mr. Charest, where do we go from  
10 here?

11 MR. CHAREST: Mr. Easterby is about to call a  
12 witness.

13 MR. EASTERBY: Good morning, Your Honor.  
14 Plaintiffs would call Mr. Jeffrey East from the USGS.

15 THE COURT: Thank you.

16 Good morning. Mr. East, if you would stand  
17 right there to be sworn.

18 Thereupon--

19 JEFFREY WILLIAM EAST,  
20 was called as a witness, and having been first duly  
21 sworn, was examined and testified as follows:

22 THE WITNESS: Yes, I do.

23 THE COURT: Please be seated in the witness  
24 stand.

25 Would you kindly state your full name for the

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1 record.

2 THE WITNESS: Yes. My name is Jeffrey  
3 William East.

4 THE COURT: Thank you.

5 DIRECT EXAMINATION

6 BY MR. EASTERBY:

7 Q. Good morning, Mr. East. I'm sorry you've had  
8 to come back so many times. We had some scheduling  
9 issues.

10 Could you please tell the Court what you do  
11 for a living.

12 A. I'm a hydrologist.

13 Q. Are you the water surface specialist for the  
14 Texas Water Science Center?

15 A. Surface water specialist is what we call it,  
16 yes.

17 Q. And what does that job entail doing?

18 A. The USGS uses standard methods and procedures  
19 and policies for the collection of data. And so it's  
20 my job to understand those policies and then to ensure  
21 that staff in the USGS Texas Water Science Center  
22 follow those methods and policies.

23 Q. And surface water, does that include things  
24 like the Addicks and Barker reservoirs?

25 A. Yes, sir.

1 Q. Does the USGS have two gauges inside the  
2 Addicks and Barker reservoirs?

3 A. Yes, sir.

4 Q. And do you happen to recall what the numbers  
5 of those are? If you don't, I can show you exhibit to  
6 refresh your recollection.

7 A. Yes, sir, I do know those.

8 Q. Okay. Is it correct that Addicks is USGS  
9 8073000?

10 A. Yes, sir.

11 Q. And that Barker is USGS 8072500?

12 A. Yes, sir.

13 Q. And could you just explain to the Court  
14 briefly, how does the USGS equipment out there  
15 determine the elevation of the reservoir pools of water  
16 surface?

17 A. So the gauges, there are a variety of  
18 sensors, electronic sensors, that will measure the  
19 height of the water. There are actually multiple  
20 sensors, so they use different methods. And then,  
21 additionally, we have physical means of measuring  
22 manually that we use when we visit the site and can  
23 calibrate the electronic sensors.

24 Q. And I know the Court heard some about this at  
25 the site inspection, but I believe you'll have a radar

1 to determine the elevation?

2 A. Yes, sir. That is our primary sensor.

3 Q. Pressure transducer, which forces the bubbles  
4 up so you can get an elevation that way?

5 A. That's correct, sir.

6 Q. And then you got the old plumb bob, just a  
7 weighted line on -- a weighted apparatus on a line you  
8 lower into the water; right?

9 A. Yes, sir.

10 Q. Okay. And does USGS regularly go out and  
11 inspect and calibrate that equipment?

12 A. Yes, we do.

13 Q. Do you believe that the readings that come  
14 from the USGS website for those gauges are reliable?

15 A. Yes, sir.

16 Q. Okay. I'd like to turn your attention now to  
17 what's been marked for identification as Plaintiffs'  
18 Exhibit 138. And I have a copy for you, Mr. East, if  
19 you would like to read along.

20 A. Thank you.

21 Q. And, Mr. East, Plaintiffs' Exhibit 138 is a  
22 USGS document; correct?

23 A. Yes, sir.

24 Q. And you had your deposition taken in this  
25 matter?

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1 A. Yes, I did.

2 Q. By me and Mr. Irvine; correct?

3 A. Yes, that's correct.

4 Q. And you were part of the team that put this  
5 report together?

6 A. No, sir. I reviewed the report, but I did  
7 not compile it.

8 Q. Thank you for the correction.

9 Its title is "Characterization of Peak  
10 Extreme Flows and Flood Inundation of Selected Areas in  
11 Southeastern Texas and Southwestern Louisiana from the  
12 August and September 2017 Flood Resulting from  
13 Hurricane Harvey." Correct?

14 A. Yes, sir.

15 Q. And in the deposition we talked about some  
16 USGS gauges that are located on some of the incoming  
17 tributaries that come into Addicks and Barker  
18 reservoirs.

19 Do you recall that?

20 A. Yes, sir, I do.

21 Q. And you're familiar with those gauges?

22 A. Yes, sir.

23 Q. And you're familiar with the data from those  
24 gauges from the Harvey event?

25 A. Yes, sir.

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1 Q. And is that information contained within  
2 PX138?

3 A. Data from those gauges are included.

4 MR. EASTERBY: Your Honor, we'd move to admit  
5 Plaintiffs' Exhibit 138 into evidence.

6 MS. DUNCAN: No objection.

7 THE COURT: Thank you, Ms. Duncan. Admitted.  
8 (Whereupon, Plaintiffs' Exhibit 138 was  
9 admitted into evidence.)

10 BY MR. EASTERBY:

11 Q. Okay. Mr. East, I would like to turn your  
12 attention to page 5 of this exhibit, which has been  
13 Bates-stamped USGS0073459.

14 And if you look at the bottom, do you see a  
15 gauge on line 35?

16 A. Yes, sir.

17 Q. And that's 8072300?

18 A. Yes, sir, that's correct.

19 Q. Buffalo Bayou near Katy, Texas; right?

20 A. Yes, sir.

21 Q. Do you happen to know where that gauge is,  
22 sir?

23 A. I believe it's near -- to be honest, I don't  
24 remember the name of the road, but I have been there  
25 physically, yes. So I know where it's at.

1 Q. Greenbusch?

2 A. Yes. Thank you.

3 MR. EASTERBY: All right. Your Honor, I'd  
4 like to put up Plaintiffs' Exhibit 139, if I could,  
5 just to maybe assist the Court and the witness with  
6 locations.

7 BY MR. EASTERBY:

8 Q. Do you remember me marking this map at your  
9 deposition, Mr. East?

10 A. Yes, sir I do.

11 Q. And the gauge we just talked about, Upper  
12 Buffalo Bayou, 8072300, is over here; right?

13 A. That's correct.

14 Q. And you're familiar with that area?

15 A. Yes, sir.

16 Q. Does this little icon accurately depict the  
17 location of that gauge?

18 A. Yes, sir, that looks accurate.

19 MR. EASTERBY: Okay. And I can run through  
20 all of them, but the sake of time, I'm going to offer  
21 to admit Plaintiffs' Exhibit 139 into evidence.

22 MS. DUNCAN: No objection.

23 THE COURT: Admitted.

24 (Whereupon, Plaintiffs' Exhibit 139 was  
25 admitted into evidence.)



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1 BY MR. EASTERBY:

2 Q. Okay. Mr. East, you know what? I have a  
3 copy of the map I'm going to tender to you so you can  
4 follow along with it if you'd like. I made a larger  
5 copy.

6 MR. EASTERBY: Your Honor, would you care for  
7 one?

8 THE COURT: No.

9 MR. EASTERBY: Okay.

10 BY MR. EASTERBY:

11 Q. All right. Mr. East, we're back to  
12 Plaintiffs' Exhibit 138. We talked about line 35.  
13 Let's talk about line 36, 8072730. Correct?

14 A. That's correct.

15 Q. Bear Creek near Barker, Texas.

16 A. Correct.

17 MR. EASTERBY: And could you put up the map  
18 again, please, Matt? I hate to keep popping back and  
19 forth. It's 139.

20 BY MR. EASTERBY:

21 Q. Okay. Let's see. That's up here; is that  
22 correct, Mr. East?

23 A. That's correct, yes, sir.

24 Q. And have you been to that gauge as well?

25 A. Yes, sir, I have.

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1           Q.    It's a little bit north and a little bit west  
2   of the West Houston Airport; is that right?

3           A.    I'm not sure where that airport is, to be  
4   honest, but on the map -- well, the map, it doesn't --  
5   it shows it on the map. So, yes, compared to that, it  
6   does.

7           Q.    Fair enough. And getting back to  
8   Exhibit 138, on line 37 we see 8072760, Langham Creek  
9   at West Little York Road near Addicks, Texas; correct?

10          A.    That's correct.

11          Q.    And last time I do the map, I promise you.  
12   Is that up here, Mr. East?

13          A.    Yes, sir, that's it.

14          Q.    Now, those three gauges we just talked about,  
15   do they measure the flow of stormwater that's going  
16   through them?

17          A.    Not exactly, no, sir.

18          Q.    I think I butchered that in the deposition  
19   too.

20                Can you explain what they do measure in terms  
21   of cubic feet per second?

22          A.    USGS measures the gauge height at the  
23   location, how high the water gets above a given datum.  
24   And then we physically make discharge measurements at  
25   individual points in time. We use those discharge

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1 measurements to develop a relation between the two.

2 And so we compute discharge using that relation, and  
3 those are the data that are provided.

4 Q. And are those the stage-discharge rating --

5 A. Rating curve.

6 Q. Stage-discharge rating curves.

7 And so for those three gauges we've  
8 identified, were there stage-discharge rating curves  
9 done after Harvey in connection with the Harvey event?

10 A. Measurements were made at each of those  
11 sites, yes, sir.

12 Q. Okay. Turn, if you would, to page 9 of  
13 Plaintiffs' Exhibit 13. And I really would just like  
14 to focus on page 9, this USGS 73463.

15 Let's see. Line 37, if you could zoom that  
16 in, Matt.

17 That's 8072760; correct?

18 A. Yes, sir.

19 Q. And I believe we established that's the  
20 Langham Creek gauge up there at West Little York?

21 A. That's correct.

22 Q. And so up here on the top column, we can see  
23 the peak streamflow in feet cubed per second; right?

24 A. That's correct.

25 Q. And what -- what value is indicated for that

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1 gauge right there in Langham Creek?

2 A. It's 9,000 cubic feet per second.

3 Q. And this is in connection with the Harvey  
4 event?

5 A. Yes, sir. That's the peak value that we  
6 determined during that event.

7 Q. Okay. It's got the rank of streamflow along  
8 all annual peak streamflows; correct?

9 A. Yes, sir.

10 Q. And it says three.

11 A. That's correct.

12 Q. What does that tell you?

13 A. That in the period that the USGS has  
14 collected data at that location, this will be the  
15 third-highest peak discharge that we recorded.

16 Q. And then the next column is the number of  
17 annual peak streamflows in period of record; right?

18 A. Yes, sir.

19 Q. So y'all have done 40?

20 A. That's correct.

21 Q. And so Harvey was the third highest of the  
22 40?

23 A. That's correct.

24 Q. Okay. Then it's got this AEP for observed  
25 August 2017 flood; correct?

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1 A. Yes, sir.

2 Q. AEP is annual exceedance probability?

3 A. Yes, sir.

4 Q. What does that mean?

5 A. That means in any given year, what is the --  
6 you know, what is the probability that this discharge  
7 will be equal to or exceed it in any given one year.

8 Q. So -- and I'm a layperson. I think about,  
9 like, 100-year storms would be 1 percent?

10 A. Yes, sir.

11 Q. So what does 6.2 percent equate to, if you  
12 know, roughly?

13 A. 1 divided by 6.2 basically. So I'm not quite  
14 sure, off the top of my head.

15 Q. 20-, 30-year?

16 A. Probably 20-year flood. 20, 25 would be my  
17 guess. I'd have to do the math to know for sure.

18 MR. EASTERBY: Thank you, Mr. East.

19 That's all the questions I have. I pass the  
20 witness.

21 THE COURT: Ms. Duncan.

22 MS. DUNCAN: Your Honor, we have no questions  
23 for Mr. East.

24 THE COURT: May the Court excuse Mr. East as  
25 a witness?

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1 MS. DUNCAN: Yes.

2 THE COURT: Mr. Easterby, may the Court  
3 excuse Mr. East?

4 MR. EASTERBY: Yes, sir, Your Honor.

5 THE COURT: Mr. East, thank you very much.  
6 Thank you for adding your testimony to the record.

7 THE WITNESS: Yes, sir.

8 MR. EASTERBY: Your Honor, we would next call  
9 our last witness, Mr. Matthew Deal, who is an expert  
10 witness in this case.

11 THE COURT: How do you spell his last name?

12 MR. EASTERBY: D-e-a-l.

13 THE COURT: Mr. Deal, if you would approach  
14 the bench, that would be helpful.

15 Would you raise your right hand to be sworn.  
16 Thereupon--

17 MATTHEW C. DEAL,  
18 was called as a witness, and having been first duly  
19 sworn, was examined and testified as follows:

20 THE WITNESS: I do.

21 THE COURT: Please be seated in the witness  
22 stand.

23 THE WITNESS: Thank you.

24 THE COURT: Would you state your full name  
25 for the record.

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1 THE WITNESS: My name is Matthew C. Deal,  
2 D-e-a-l.

3 THE COURT: Thank you.

4 DIRECT EXAMINATION

5 BY MR. EASTERBY:

6 Q. Mr. Deal, who do you work for?

7 A. I have my own firm, Deal Sikes.

8 Q. What does Deal Sikes do?

9 A. We're a real estate valuation and counseling  
10 firm.

11 Q. Were you engaged in this matter to provide  
12 some expert opinions?

13 A. I was.

14 Q. Let me hand you what's been marked for  
15 identification as Plaintiffs' Exhibit 2205.

16 And no need to show it yet, Matt. I have to  
17 do some foundation here first.

18 Is that a true and correct copy of your --  
19 your expert report dated November 5th, 2018?

20 A. It appears to be, yes.

21 Q. Okay. And you did a rebuttal report as well;  
22 correct?

23 A. I did.

24 Q. In relation to Mr. Landry's --

25 A. Yep.

1 Q. -- work?

2 A. Yes.

3 Q. We're going to preserve that for later. So  
4 let's just talk about your main report.

5 Please look at your professional  
6 qualifications on page 48 of your report if that will  
7 help you with your recollection. I'm going to ask you  
8 about your background. Sorry about the binder clip.

9 A. That's all right.

10 Q. Tell us about your education, if you would,  
11 briefly.

12 A. Sure. I grew up in Houston. I've been here  
13 all my life. I graduated high school in 1984 and then  
14 went to the University of Texas at Austin and graduated  
15 in 1988 with a bachelor of arts degree.

16 Shortly after graduating from college, I  
17 came -- came back to Houston and started my career as  
18 an appraiser. So I have been appraising properties  
19 since 1989, almost 30 years.

20 Then I continued my education over that  
21 period of time. I'm a state-certified general real  
22 estate appraiser in Texas. I'm a member of the  
23 Counselors of Real Estate, hold a CRE designation.

24 Q. Okay. And CRE, is that an accreditation for  
25 appraisers?



1           A.     It's for appraisers.  It's a broader group of  
2     about 1,000 international people with that designation.

3           Q.     Do you have any specialized professional  
4     competency in the area of real estate  
5     appraisal/valuation?

6           A.     I do.  I have appraised virtually every  
7     property type for lots of different reasons throughout  
8     my career.  Specifically with regard to -- if I can  
9     relate it to this assignment, a couple of things that  
10    might be of interest, we do -- we do a lot of damage  
11    analysis, a lot of before-and-after analysis caused by  
12    detrimental conditions, sort of a two -- two buckets, I  
13    would put it.

14                   Very large amounts of properties -- I cut my  
15    teeth on the polybutylene cases way back in the '90s,  
16    working on thousands of homes that were damaged by that  
17    situation, as well as, in addition to that and  
18    throughout my career, class action lawsuits involving  
19    thousands of properties in proximity to petrochemical  
20    refineries.  Currently working on cases involving  
21    environmental contamination in the ship channel.

22                   So it's been a constant throughout my career  
23    of large litigation assignments involving thousands of  
24    properties.  That's one area.

25                   And then I -- I have a particular expertise

1 in the Houston market -- 90-plus percent of our work is  
2 in the Harris and surrounding counties -- and a  
3 particular expertise in the arena of condemnation.

4 We -- we do condemnation work for -- as much  
5 as anybody in this area on behalf of property owners,  
6 as well as on behalf of condemning authorities  
7 exercising their power of condemnation, typical  
8 roadways, railways, power lines and pipelines. We do  
9 it all the time.

10 Q. Have you ever testified as an expert witness  
11 in court before?

12 A. I have testified hundreds of times.

13 Q. Have you been accepted as an expert witness  
14 in those proceedings?

15 A. Every time, yes.

16 Q. Okay. I think you have the Yellow Book  
17 underneath that report you got there.

18 A. I do.

19 Q. Can you kindly explain -- I call it the  
20 Yellow Book. It's actually got a proper title. Can  
21 you read it out, please.

22 A. It's the -- it's the "Interagency Land  
23 Acquisition Conference Uniform Appraisal Standards for  
24 Federal Land Acquisitions."

25 Q. And just to be real clear for the Court, did

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1 you do any actual appraisals so far in this engagement?

2 A. No, we have not.

3 Q. All right. The Yellow Book, what is that  
4 about? What is it for?

5 A. These are the -- these are the required  
6 standards of the federal case, federal acquisition of  
7 property, under eminent domain. It's slightly  
8 different than what we do in Texas. There's a lot of  
9 similarities, but there's also a few differences. This  
10 is -- this is the required analysis that needs to be  
11 done to do the proper before-and-after appraisals in a  
12 federal acquisition.

13 Q. Okay. And you understand we're in the  
14 liability phase of the case?

15 A. That's my understanding, yes.

16 Q. Let's talk about this market study that's the  
17 subject of your report. If you look at the first page  
18 that's got November 5th.

19 And, Matt, again, I don't think we need to  
20 see it.

21 But it lists six properties there.

22 Do you see that, Mr. Deal?

23 A. I do.

24 Q. And just to get a good record on this, you  
25 did some analysis regarding the Banker residence,

1 Burnham residence, Giron residence, Stewart residence,  
2 Turney residence, and West Houston Airport?

3 A. That's correct.

4 Q. Can you please explain to the Court, what is  
5 a market study?

6 A. A market study is an analysis of supply,  
7 demand, and prices for -- of a specific property type  
8 in a specific area. It's an appraisal -- Appraisal  
9 Institute term of art that we apply in a lot of these  
10 types of cases.

11 Q. When you're going to do an appraisal, do you  
12 typically do a market study first?

13 A. There are -- there are elements of a market  
14 study that -- that are certainly part of the appraisal,  
15 yes.

16 Q. Do you need --

17 THE COURT: Go ahead. I'm listening.

18 MR. EASTERBY: I'm sorry, Judge.

19 THE COURT: I'm wrestling with binders,  
20 but...

21 MR. EASTERBY: Okay.

22 BY MR. EASTERBY:

23 Q. All right. Mr. Deal, what factors did you  
24 consider in doing the market study that's the subject  
25 of your report?

1           A.     Well, the four forces of value -- those are  
2     environmental forces, social forces, governmental  
3     forces, and social forces -- are always part of any  
4     type of valuation but also part of a market study.

5                     And so those are elements such as deed  
6     restrictions in a given community; demographics,  
7     meaning income levels in a certain area; school  
8     districts; proximity to amenities; proximity to  
9     employment centers; proximity to public roadway  
10    infrastructure; things like that. Those are things  
11    that create value in certain areas, and it's no  
12    different for this -- for these neighborhoods that  
13    we're talking about.

14          Q.     And, Mr. Deal, I believe on your report,  
15    pages 1 and 2, you identify 11 numbered paragraphs that  
16    sets forth the research that you did in connection with  
17    this market study?

18          A.     Yes.

19          Q.     I really don't think we need to go through  
20    all of them, but I did want to ask you just a couple of  
21    questions. You talk about deed restrictions. Here in  
22    the Harris County area, do you think deed restrictions  
23    are kind of an important factor?

24          A.     They are a big deal in Harris County and the  
25    surrounding counties. We don't have zoning here. As

1 many people know, Houston is a city without zoning.  
2 Deed restrictions are a very important part of things  
3 that help value. They create value and support value.

4 Q. Just to give the judge some context, if you  
5 think about a community like the Montrose, are those  
6 all deed-restricted communities?

7 A. A lot of those areas are not deed-restricted  
8 in Montrose close to downtown.

9 Q. So sometimes you'll see an old one-story  
10 house, and next to it you'll see a 60-story townhome?

11 A. That's typical here in Houston, yes.

12 Q. If you've got a deed-restricted community  
13 that's residential, you would or would not see  
14 something like that?

15 A. You would not see that. You cannot see that.  
16 It's not legally permissible. In appraisal parlance,  
17 in the highest and best use portion of a valuation,  
18 it's not legally permissible for that to happen in a  
19 deed-restricted community.

20 Q. Okay. And, in connection with this  
21 engagement, did you actually go out and look at those  
22 six test properties?

23 A. We -- we looked at all -- we inspected them  
24 inside and out, with the subject that one residence had  
25 sold, as we heard yesterday. So we were not able to

1 get inside that house; we viewed it from the street.

2 But, for all the other ones, we went inside.

3 Q. And I know your report has got a detailed  
4 discussion of the specifics of each test property in  
5 terms of how long they were out of the house and stuff.  
6 The Court's already heard that testimony, so let's not  
7 replot that ground.

8 Did you talk to any Realtors in doing your  
9 market study?

10 A. We did.

11 Q. Anybody in particular that stands out in your  
12 mind?

13 A. Rachel Clark is one that stands out, yes.

14 Q. What area does she specialize in? What  
15 neighborhood? I guess.

16 A. The Villages of Bear Creek. She specializes  
17 in that area.

18 Q. Now, in doing your market study, did you rely  
19 exclusively on MLS transactions?

20 A. We did not, no.

21 Q. What is an MLS transaction?

22 A. MLS stands for multiple listing service.

23 It's the Houston Association of Realtors system of  
24 putting sales on a database -- or putting listings on a  
25 database and, ultimately, when they trade, putting the

1 sale price so they can be tracked. Texas -- as I heard  
2 earlier, Texas is a nondisclosure state. You're not  
3 required to -- to report sale prices. But if you enter  
4 yourself into -- have a broker or an agent, then the  
5 MLS agent puts the information on the website.

6 Q. And, in doing your study, did you consider,  
7 for each test property, the duration and extent of the  
8 submergement?

9 A. We did, yes.

10 Q. The amount of damage to the structure?

11 A. Yes.

12 Q. And the period in which the plaintiffs were  
13 unable to use the property?

14 A. We did, yes.

15 Q. Okay. Are you familiar with the Uniform  
16 Standards of Professional Appraisal Practice?

17 A. Yes, I am.

18 Q. Okay. In the exercise of USPAP, did you find  
19 that the data and research you and your team conducted  
20 was sufficient for you to reach some opinions in this  
21 matter?

22 A. Yes.

23 MR. EASTERBY: Your Honor, we now would  
24 tender Mr. Sikes as an expert in real estate appraisal  
25 and real estate valuation.



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1 THE WITNESS: Mr. Deal.

2 MR. EASTERBY: I'm sorry. Mr. Deal.

3 THE WITNESS: It's happened before.

4 THE COURT: Ms. Tardiff?

5 MS. TARDIFF: I do have some voir dire.

6 THE COURT: I'm sorry?

7 MS. TARDIFF: I do have some voir dire.

8 THE COURT: You have voir dire?

9 MS. TARDIFF: I do.

10 THE COURT: Please.

11 VOIR DIRE EXAMINATION

12 BY MS. TARDIFF:

13 Q. Good morning, Mr. Deal.

14 A. Good morning.

15 Q. Your professional experience, as described  
16 here to us this morning, is as an appraiser; correct?

17 A. That's correct.

18 Q. And each of the times you've been qualified  
19 to testify in court, it has been as an appraiser; is  
20 that correct?

21 A. I think in my deposition I said there may  
22 have been a few times where I've -- it's in the realm  
23 of valuation and appraisal. I would agree with you,  
24 yes.

25 Q. Okay. Very good. And you've never been

1 qualified to testify as an expert in any other field;

2 is that correct?

3 A. No, I have not.

4 Q. And you are not an economist; is that  
5 correct?

6 A. I -- as far as economics with regard to the  
7 valuation of real property, I study economics, that  
8 piece of it. I don't consider myself to be an  
9 economist.

10 Q. And you did not use regression analysis as  
11 any part of your appraisal practice; is that correct?

12 A. That's correct.

13 Q. And you're also not an expert in  
14 econometrics?

15 A. That's correct.

16 Q. And you're not offering any opinion in this  
17 case on the cause of flooding to any of the properties  
18 that are identified in your report; correct?

19 A. I am not.

20 Q. You're also not purporting to be an expert in  
21 hydraulics or hydrology here today?

22 A. I am not, no.

23 Q. And you're not a professional engineer; is  
24 that correct?

25 A. Certainly not, no.

1 Q. I do want to ask you a couple questions about  
2 your methodology. You indicated that you're familiar  
3 with the requirements of the Uniform Standards of  
4 Professional Appraisal Practice, which is also commonly  
5 referred to as USPAP; is that correct?

6 A. That's correct.

7 Q. And are those professional standards that you  
8 apply in preparing appraisals in your work?

9 A. It is, yes.

10 Q. And is it fair to say that the professional  
11 standards set forth in USPAP are the standards you have  
12 applied in every other case in which you've testified  
13 as an expert in court?

14 A. If I've done an appraisal, then, yes, I'm  
15 required to testify -- or required to do the appraisal  
16 pursuant to USPAP.

17 If it's outside of appraisal and I've  
18 testified, then it's not necessarily -- all portions of  
19 USPAP aren't required.

20 Q. Very good.

21 A. Certain portions are but not all of them.

22 Q. Understood.

23 And you've testified here this morning that  
24 you did not conduct an appraisal in this case as to any  
25 of the properties identified in your report?

1 A. That's -- that's a fact.

2 Q. And, in the report you've identified for us,  
3 you have not done the analysis required to offer an  
4 opinion of market value; is that correct?

5 A. That's correct. I have not done an appraisal  
6 for market value. I have not done that.

7 Q. Okay. And so you are not offering an opinion  
8 on market value for any property at issue in your  
9 report before Hurricane Harvey; correct?

10 A. That's correct.

11 Q. And that same is true for after Hurricane  
12 Harvey?

13 A. That is correct.

14 Q. And a market study, which is what you did  
15 here, is different than an appraisal; is that right?

16 A. A market study is on the way to an appraisal,  
17 but it falls -- it doesn't take the step -- the next  
18 step in order to opine on those values before and  
19 after. So it is different -- it's part of an  
20 appraisal, but it's not -- doesn't go to the next step.

21 Q. Exactly right. It falls well short of that.

22 And the professional standards set forth in  
23 USPAP do not apply to a market study such as the one  
24 you've prepared in this case; is that correct?

25 A. As I said, only certain ones do. Competency

1 is one. The ethics rule per USPAP is required. I'm  
2 required to meet those tests. But there's no standard  
3 rules. 1, 2, 3, 4 do not apply to the market study.  
4 But portions of USPAP, which I have complied with --  
5 competency, ethics -- I've done that. But the other  
6 ones, there's no -- there's no space for it in the  
7 other part of USPAP.

8 Q. Right. So, aside from competency and ethics,  
9 which we understand, USPAP doesn't set forth a set of  
10 professional standards to guide what you've termed as a  
11 market study and define how you do it and what should  
12 be included in it?

13 A. I believe that's correct, yes.

14 Q. And, likewise, you held up a copy of the  
15 Yellow Book, the federal standards. And those  
16 standards likewise do not provide a set of guidelines  
17 or methodology for a market study such as what you did  
18 here?

19 A. They do not. This is -- before and after  
20 appraisal that we've talked about, this is what this is  
21 about. And we're not at that phase, I understand, of  
22 this case. And so we haven't done that.

23 Q. And your market study, as you described here  
24 today, involves selecting, for each of the residential  
25 properties, at least one set of comparable -- what you

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1 call comparable transactions pre-Harvey and another set  
2 of comparable transactions post-Harvey; is that  
3 correct?

4 A. That's correct.

5 Q. And your market study does not make any  
6 adjustments to those comparable transactions; correct?

7 A. That's fair. Yes.

8 Q. And you cannot say that you would have even  
9 used any of these comparable transactions had you  
10 actually performed an appraisal; is that correct?

11 A. I think I told you in my deposition that,  
12 very likely, some of them would have been but some of  
13 them may not have been.

14 Q. And you can't say until you actually do that  
15 analysis?

16 A. That's fair. Yes.

17 Q. And in your post-Harvey comparable  
18 transactions, you had sales prices of homes that are  
19 gutted, remediated, and remodeled; is that correct?

20 A. I think there might be another category.

21 Q. There might be.

22 A. But those are three of the categories, yes.  
23 I think there's a category for wet, I think we called  
24 it, but --

25 Q. There is, sir --

1 THE COURT: I'm sorry. What was the latter

2 category, Mr. Deal?

3 THE WITNESS: Wet.

4 THE COURT: Wet.

5 MS. TARDIFF: Yes.

6 BY MS. TARDIFF:

7 Q. So, in order, wet, gutted, remediated, and  
8 remodeled, four different groupings.

9 A. Yeah. Just to be specific, the last one is  
10 not remodeled, renovated, but I think it's the same  
11 thing.

12 Q. Thank you for that clarification.

13 And, again, your market study method doesn't  
14 make any effort to adjust the sales data for those  
15 different conditions; correct?

16 A. It does not, no.

17 Q. And you would agree that, in an appraisal  
18 analysis, an appraiser would have to adjust for  
19 postflood conditions -- be it wet, gutted, remediated,  
20 or renovated -- before applying a transaction to a  
21 property being appraised and valued?

22 A. It would require adjustment for those  
23 characteristics as well as a multitude of other  
24 characteristics, yes.

25 Q. Exactly right. So your market study, as I

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1 understand, simply reports a low, high, average, and  
2 medium numbers based on selected raw sales data; is  
3 that right?

4 A. That's correct.

5 Q. And you have never done a market study like  
6 the one you did here in another case involving  
7 flooding; is that right?

8 A. Involving flooding? No. Other types of  
9 cases but not flooding.

10 Q. And your firm, Deal Sikes, has also never  
11 done a market study like the one you've done in this  
12 case in another case involving flooding; is that right?

13 A. Involving flooding specifically, no.

14 Q. And you've never testified in court as an  
15 expert witness based solely on a market study like the  
16 one you've prepared in this case; is that correct?

17 A. I'm trying to remember whether I have or not.  
18 I don't recall, sitting here.

19 MS. TARDIFF: And so, Your Honor, based on  
20 that, Mr. Deal may certainly be qualified to offer an  
21 opinion of market value based on an appraisal. But, as  
22 he's acknowledged, he has not done that in this case.

23 We would oppose plaintiffs' request to  
24 qualify Mr. Deal as an expert under Rule 702 for the  
25 purpose of -- purposes of offering opinion testimony



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1 based on a market study that is not based on any  
2 specified principles or methods.

3 THE COURT: Mr. Easterby, may the Court ask a  
4 question of Mr. Deal before we turn back to you?

5 MR. EASTERBY: Yes, sir.

6 THE COURT: Mr. Deal, you said you had a  
7 special qualification, and it was three initials. What  
8 was that qualification?

9 THE WITNESS: It's -- I'm a member of the  
10 Society of Real Estate Counselors. CRE is what that  
11 is.

12 THE COURT: What does that qualification  
13 entail?

14 THE WITNESS: That is an invitation-only  
15 organization for people -- professionals in the real  
16 estate world, a lot of appraisers that provide  
17 independent counseling to property owners or to any  
18 client, that's not specific to valuation but  
19 specific -- but for any type of -- of advice,  
20 nonbrokerage-type advice to -- to any client.

21 THE COURT: Which body or entity gives or  
22 authorizes that -- that designation?

23 THE WITNESS: That is an independent  
24 organization, the Society of Real Estate Counselors.  
25 They're out of Chicago. And, like I said, there's

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1     about 1,000 of us internationally, mostly in the United  
2     States.

3                   THE COURT:   But you had indicated also you  
4     have given -- I'm not sure you've given advice -- you  
5     have prepared studies of damaged properties.   What  
6     kinds of damaged properties?

7                   THE WITNESS:   On the cases -- the situations  
8     I described earlier were primarily residential  
9     properties in these events that occurred.

10                   As an example, the polybutylene plumbing  
11     cases; the Colonial pipeline that exploded many years  
12     ago in the San Jacinto River, and then this litigation  
13     involving properties being proximate to that.   Those  
14     are thousands of residential properties.

15                   And we're currently working on similar cases  
16     in the ship channel of Houston that have alleged --  
17     different cases that have alleged contamination of  
18     residential -- large amounts of residential property.

19                   THE COURT:   Have you testified as an expert  
20     in any of those situations?

21                   THE WITNESS:   I have not yet.

22                   THE COURT:   Yet.

23                   THE WITNESS:   I'm about to, but ...

24                   THE COURT:   Mr. Easterby?

25                   MR. EASTERBY:   Your Honor, we offer Mr. Deal

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1 on the severity element. And I do believe he has  
2 testified in prior cases about damage to property  
3 specific to condemnation and I think maybe even an  
4 inverse condemnation case.

5 THE COURT: You may ask Mr. Deal.

6 MR. EASTERBY: Okay.

7 DIRECT EXAMINATION (Continued)

8 BY MR. EASTERBY:

9 Q. Mr. Deal, in your prior work, have you  
10 testified as an expert in condemnation cases?

11 A. On many occasions, yes. Hundreds of times.

12 Q. I believe, in your CV, you have an article --  
13 let me find it.

14 "Highest and Best Use in the Role of the  
15 Dominant Estate in a Condemnation Case," under  
16 "Publications and Presentations."

17 Oh, I'm sorry. I'm looking at your partner's  
18 resumé. Here we go. Even better.

19 Let's see. On yours, "Case Studies in  
20 Condemnation Litigation." Do you see that?

21 A. Yes.

22 Q. The next one above that, "Eminent Domain, the  
23 Government's Most Awesome Power Over Private Property."

24 A. Yes.

25 Q. And so have you done prior expert testimony

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1 about the effects of contamination on real property

2 value as an expert?

3 A. I have, yes.

4 MR. EASTERBY: Your Honor, we would renew our  
5 tender.

6 THE COURT: Now, specifically, what are you  
7 asking the subject matter of the expert testimony to  
8 be?

9 MR. EASTERBY: Specifically, Your Honor --

10 THE COURT: Real estate appraisal is not  
11 going to do it in this particular case. Real estate  
12 valuation might.

13 MR. EASTERBY: Real estate valuation. And  
14 it's really severity, Your Honor. So real estate  
15 valuation and severity.

16 THE COURT: We could say real estate market  
17 studies and real estate valuation.

18 MR. EASTERBY: Real estate market studies and  
19 real estate valuation, we would tender him on those  
20 subjects, Your Honor.

21 MS. TARDIFF: May I ask one follow-up, Your  
22 Honor?

23 THE COURT: Yes.

24 VOIR DIRE EXAMINATION

25 BY MS. TARDIFF:

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1           Q.     So, Mr. Deal, in the instances that  
2     Mr. Easterby just asked you about, where you have  
3     testified, be it in condemnation cases or otherwise,  
4     and provided analysis with respect to -- a damages  
5     analysis. You mentioned detrimental conditions.

6                 In each of those instances, you did an  
7     analysis that involved a before-and-after opinion --  
8     appraisal that allowed you to reach an opinion as to  
9     value; correct?

10           A.     That's correct. Yes.

11                 MS. TARDIFF: Your Honor, we stand by our  
12     objection with respect to the qualifications, given the  
13     testimony regarding the lack of methodology as to a  
14     market study and what can be done with that.

15                 THE COURT: Ms. Tardiff, I have a set of  
16     further questions.

17                 Sorry to take your time for this exercise.

18                 But Mr. Deal has just testified he applied  
19     USPAP insofar as the steps leading up to an appraisal.

20                 Do you -- did you hear that?

21                 MS. TARDIFF: I heard only that he honored  
22     USPAP with respect to competency and ethics and -- and  
23     not --

24                 THE COURT: That is not what I heard. So why  
25     don't you -- you have the ability to ask Mr. Deal

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1 further questions.

2 VOIR DIRE EXAMINATION

3 BY MS. TARDIFF:

4 Q. So, Mr. Deal, with respect to USPAP, you  
5 identified for us that USPAP does have a set of  
6 standards that apply to an appraisal; correct?

7 A. That's correct.

8 Q. And if you are preparing an appraisal in  
9 accordance with those standards, there is -- there is a  
10 lengthy list of requirements that have to go into an  
11 appraisal report; correct?

12 A. There are, yes.

13 Q. And your market study does not include all of  
14 those elements; correct?

15 A. My market study could be part of the  
16 appraisal. And they would all comply with what's  
17 required under Standard Rule 1 of USPAP to reach an  
18 opinion of market value.

19 So it would be -- those -- all those elements  
20 would be part of an appraisal. They would be inside  
21 the appraisal. But the piece that hasn't been done is  
22 the final opinion of market value that would be reached  
23 upon analysis of this market study. We -- we stopped  
24 short of ultimately opining on an opinion of value, as  
25 I've said today. All those steps would be part --

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1 would be part of an appraisal.

2 Q. So you have what is really the very -- maybe  
3 the first step in terms of gathering information; but,  
4 beyond that, your market study goes no further;  
5 correct?

6 You have not taken even the select sales  
7 you've looked at and done any kind of an adjustment, as  
8 you would be required to do under USPAP, to do a  
9 comparable sales analysis; correct?

10 A. To -- to reach an opinion of market value, we  
11 did not take -- we were not asked to take that final  
12 step, and we did not.

13 Q. Well, it's more than just the final step.  
14 There are several interim steps that need to be taken  
15 in order for you to be able to offer any opinion of  
16 value in compliance with USPAP; correct?

17 A. Many steps have been taken: Analysis of the  
18 market area in which it's located, researching the deed  
19 restrictions, all the forces of value that I've  
20 described, proximity to amenities or -- all those  
21 things, demographics, all of those things are part  
22 of -- would be part of an appraisal.

23 Selection of sales, we've had a lot of sales  
24 in here. It's -- the winnowing of the sales, the  
25 adjustment of the sales, and the opinion of value has

1 not been done, as I've stated.

2 Q. So all your market study does is collect some  
3 raw sale prices in before-and-after and present those  
4 in a table with -- with a low, high, medium, and  
5 average with no further analysis as to whether those  
6 listed sales would in fact be comparable sales in  
7 the -- in -- under USPAP for the purpose of coming up  
8 with an opinion of value?

9 A. I don't know -- no, that's not right.

10 As we talked about, we researched hundreds of  
11 transactions in these markets. We threw a very wide  
12 blanket, hundreds of transactions.

13 And we did cull those down into what we  
14 believe were the most comparable sales to each of these  
15 test properties before and after. And so we're not  
16 looking at, just willy-nilly, all kinds of data. We  
17 have narrowed it down to what we believe are comparable  
18 transactions.

19 Q. But you have not taken the next step of  
20 looking at those transactions that you've listed and  
21 determining whether these would, in fact, be sales that  
22 you would use if you did a full-blown comparable sales  
23 analysis in compliance with USPAP in order to come up  
24 with an opinion as to value; correct?

25 A. There would be an additional step to select



1 those that are the most comparable in order to do  
2 appraisals.

3 MS. TARDIFF: Your Honor, we stand by our  
4 objection with respect to qualifications as to what  
5 Mr. Deal has actually performed here today and lack of  
6 methodology.

7 THE COURT: Those objections are not well  
8 taken. The Court qualifies Mr. Deal as an expert in  
9 real estate market studies and real estate valuation.

10 DIRECT EXAMINATION (Continued)

11 BY MR. EASTERBY:

12 Q. Okay. Mr. Deal, this market study we've  
13 heard so much about, what was its overall purpose?

14 A. The purpose of the market study is to opine  
15 as to the severity of the interference caused by the  
16 inundation of waters on the -- on the test properties.

17 Q. Yes, sir.

18 And, to reach those opinions, you -- you went  
19 out and did detailed reviews and analysis of those test  
20 properties?

21 A. I did, yes, as I described earlier.

22 Q. So, I mean, I know this sounds like a dumb  
23 and obvious question, but do you have any opinions as  
24 to whether the submergement and resulting damage to  
25 those test properties interfered with the owners' use

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1 of their properties?

2 A. Significantly interfered. Significant.

3 Q. Okay. Do you have any opinions as to whether  
4 the test properties suffered any permanent damage from  
5 being submerged by those floodwaters?

6 A. They did suffer permanent damage, damage that  
7 wouldn't be healed by itself. It would require  
8 significant amount of investment and risk of capital in  
9 order to get them all the way back to be able to be  
10 habitable.

11 Q. And, Mr. Deal, if you look at page 2 of your  
12 report --

13 MR. EASTERBY: And, Your Honor, we would move  
14 to admit Plaintiffs' Exhibit 2205 into evidence at this  
15 time. It is his report.

16 THE COURT: The Court reserves.

17 MR. EASTERBY: Okay.

18 BY MR. EASTERBY:

19 Q. If you look at page 2, Mr. Deal, I believe  
20 you've got --

21 I don't think you should show it yet, Matt,  
22 since the judge has reserved.

23 But can you tell us what your overall opinion  
24 was regarding these test properties.

25 A. That the inundated properties suffered a

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1 significant diminution in price levels caused by this  
2 inundation.

3 Q. I mean, just in real simple terms, before  
4 Harvey, they are homes and a terminal building; right?

5 A. Correct.

6 Q. After Harvey, what are they?

7 A. They're -- there's chaos. Flooded  
8 properties, significantly damaged properties, unusable  
9 properties in a market in disarray.

10 Q. And do you think that the damage to them had  
11 any kind of effect on their value?

12 A. Yes, I do. Yes. Without question.

13 Q. Okay. Can you -- without trying to quantify  
14 it, since that's not what you're trying to do, but just  
15 describe in your own words, what kind of impact did  
16 those test properties that were inundated by the  
17 impounded floodwaters suffer?

18 A. Well, before -- before the event -- as an  
19 example, in the Banker residence in Kelliwood, you're  
20 looking at average home prices of \$560,000 in that  
21 area, as high as \$700,000; and then after, even houses  
22 that were renovated, the average price is 425,000  
23 roughly dollars. So we're talking about -- and those  
24 that weren't renovated, significant reductions,  
25 50 percent and more than what existed before the event.

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1                   So we're talking about precipitous price

2       drops across the board.

3           Q.     Were you here when Ms. Burnham testified?

4           A.     I was.

5           Q.     And did you hear what she paid for her house?

6           A.     My memory is it's 160 or \$165,000.

7           Q.     Second one. Do you remember what she sold it  
8       for?

9           A.     My memory is \$80,000.

10          Q.     So as a percentage, that's over 50 percent?

11          A.     Just over half, yes.

12          Q.     Okay. And just for the Court's benefit, if  
13       you flip through your report, it appears you got a  
14       detailed analysis and recitation of each of these test  
15       properties we described; is that right?

16          A.     That's correct.

17                 MR. EASTERBY: Your Honor, we would move to  
18       admit his expert report, which is Plaintiffs'  
19       Exhibit 2205, into evidence.

20                 THE COURT: Court reserves.

21                 MR. EASTERBY: Okay, Your Honor.

22                 Thank you for your time today. That's all  
23       the questions I have.

24                 THE WITNESS: Thank you.

25                 THE COURT: Ms. Tardiff.

1 MS. TARDIFF: Thank you.

2 CROSS-EXAMINATION

3 BY MS. TARDIFF:

4 Q. All right. Mr. Deal, I want to start with  
5 one of your statements in response to Mr. Easterby's  
6 question that indicated that you are offering an  
7 opinion that the flooding had an impact on the value.

8 Did I hear that correct?

9 A. You did.

10 Q. And didn't you tell me earlier in response to  
11 my questions that you had not conducted an appraisal  
12 here to allow you to reach an opinion in accordance  
13 with USPAP, or the Yellow Book for that matter, on  
14 value?

15 A. The specific values of specific properties, I  
16 have not.

17 Q. Okay. So you have not -- in doing the market  
18 study, you have not correlated, with respect to each of  
19 the five residential properties discussed in your  
20 report, these prices you've selected with the actual  
21 test property in order to arrive at an opinion of  
22 value?

23 A. That's correct.

24 Q. So we've already discussed the fact that your  
25 market study is not an appraisal and, as you just

1 indicated, is not the basis for offering an opinion of  
2 market value, but I do want to discuss a few more  
3 aspects of your market study.

4 And, if we can, let's use -- I think you  
5 discussed the market value -- excuse me -- the market  
6 study for the Banker property just a moment ago.

7 So why don't we pull that up, and that's on  
8 page 3 and 4 of your report.

9 A. Yes. I'm there.

10 Q. So if we start with your comparable  
11 transactions before the flood, which is on page 3, the  
12 tables labeled both "Comparable Transactions Before the  
13 Flood" and "Improved Sales Comparison" -- or excuse  
14 me -- yes, "Improved Sale comparables." Correct?

15 A. That's correct.

16 Q. Okay. And just to reemphasize and be clear  
17 here, this is not the same thing as a comparable sales  
18 analysis that might be included in an appraisal to  
19 arrive at an opinion of value; correct?

20 A. That's correct.

21 Q. And is it fair to say that, if you were asked  
22 to prepare an appraisal of, here, the Banker residence  
23 at 4614 Kelliwood Manor Lane in Katy and we were  
24 looking for comparable sales prior to the flood, again,  
25 these five sales would not necessarily be the same

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1 sales you would select for the purposes of preparing an  
2 appraisal and offering an opinion of value; correct?

3 A. Not necessarily, but they would be on the  
4 final list for sure.

5 Q. Okay. And even if you used one or more of  
6 these listed sales as part of a comparable sales  
7 analysis in an appraisal, you would still need to go  
8 through the process of determining whether any  
9 adjustments needed to be made to the sales; correct?

10 A. Without question, yes.

11 Q. Okay. And those adjustments you -- you'd  
12 indicated earlier, there are many of them that have to  
13 be considered, but those would include adjustments for  
14 factors such as the time of the sale, the size of the  
15 lot, the size of the home, condition of the home,  
16 quality of the schools, which we heard a lot about over  
17 the last week, and location; correct?

18 A. And other things.

19 Q. And other things.

20 A. Beds, baths, other amenities of the home,  
21 things of that nature.

22 Q. And, again, that analysis was not done here?

23 A. That's correct. An appraisal analysis was  
24 not done. These sales were selected in this analysis  
25 because they did share comparability to the subject

1 property, but they weren't adjusted, as we've described  
2 many times this morning.

3 Q. Okay. So, for example, if we stick with the  
4 Banker table and look at Sale No. 2 and -- for the  
5 before, which is the home on 4503 Kelliwood Grove.

6 A. Yes.

7 Q. So that's your highest listed sales price for  
8 this table at \$715,000; correct?

9 A. It is.

10 Q. And that home is almost 1,000 square foot --  
11 square feet bigger than the Banker home.

12 A. It is. I'd have to look at the Banker sheet  
13 to confirm that.

14 Q. And I think I can refer you to page 14 of  
15 your report.

16 A. It is, yes.

17 Q. Okay. And -- and --

18 THE COURT: Ms. Tardiff, sorry. I am trying  
19 to find page 14.

20 MS. TARDIFF: That's okay.

21 THE COURT: May the Court ask a really quick  
22 question, Ms. Tardiff?

23 MS. TARDIFF: Yes.

24 THE COURT: "Gross liveable area" is defined  
25 in what way, Mr. Deal?



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1 THE WITNESS: It's air-conditioned space. It  
2 does not include the garage. It's inside the house,  
3 air-conditioned space.

4 THE COURT: All right. In Houston I can  
5 understand why you would want to define it that way.

6 THE WITNESS: Yeah.

7 THE COURT: Okay. So it doesn't include, I  
8 guess, work areas or other areas that are -- might be  
9 associated with the garage?

10 THE WITNESS: Screened-in porches. We have a  
11 lot of screened porches. We have a lot down here  
12 because of mosquitoes. That would not be in that --

13 THE COURT: Thank you. That helps.

14 THE WITNESS: -- that calculation, yes.

15 THE COURT: And the Banker property is a  
16 little over 4,000 gross.

17 THE WITNESS: Square feet of air-conditioned  
18 interior space. Yes, yes.

19 THE COURT: Thank you.

20 BY MS. TARDIFF:

21 Q. And so for the Banker property on page 14,  
22 you've got a list of information that you used.

23 A. That's correct.

24 Q. Okay. And in terms of gross liveable area,  
25 that's the same number you're using in your table --

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1 A. Yes.

2 Q. -- for the other properties? Okay.

3 And then, if we stick with Sale No. 2 that  
4 you used, that lot size -- is also for sale too -- is  
5 almost double the lot size of the Banker property;  
6 right?

7 A. It's much larger -- much larger lot, yes.

8 Q. So you're not suggesting here today that, if  
9 you did a comparable sales analysis for the purpose of  
10 doing an appraisal, that you would necessarily use  
11 Sale 2 in an appraisal given -- given the differential  
12 in the gross living area and the lot size?

13 A. I'm not saying I wouldn't -- I would use it,  
14 and I'm not saying I wouldn't use it in an appraisal.  
15 It would have to be studied more.

16 Q. Okay. But your last listed sale price for  
17 the Banker property on page 14 on July 27th, 2007, so  
18 the same year as that Sale 2, was \$447,284.

19 A. That's not correct. You just said the same  
20 year. That was ten years prior.

21 Q. I'm --

22 A. That's -- that's a totally -- that sale would  
23 not be -- the sale of the Banker residence in 2007  
24 would not be considered in any analysis that I would do  
25 for date of value of September of '17.

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1 Q. Understood. Thank you for that  
2 clarification.

3 But it stands that still that Sale No. 2 at  
4 the price listed, you can't say here today that you  
5 would definitely use that sale if you were to do an  
6 appraisal of the Banker property before the Harvey  
7 flooding?

8 A. As I stated a moment ago, that's correct.

9 Q. And, in fact, even if that Sale No. 2 were to  
10 be used, it would have to be adjusted downward because  
11 of the differential in gross living area and lot size?

12 A. I haven't done that analysis. You're asking  
13 me a question. I think the answer is, yes, it would  
14 have to be adjusted down.

15 Q. Let's take a look at -- sticking with Banker  
16 and your comparable after the flood.

17 A. Yes.

18 Q. And your approach to preparing this  
19 comparable transactions after the flood table is -- is  
20 the same approach you described for the before.

21 A. Yes.

22 Q. And, again, you simply select -- listed some  
23 select sales for the time period after the flooding --

24 A. That's --

25 Q. -- to show some variation in prices based on

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1 these different conditions. Here we have gutted,  
2 remediated, and renovated; correct?

3 A. That's correct.

4 Q. Once again, your report does not contain the  
5 analysis required to determine if you would use any of  
6 these sales if you were to do a comparable sales  
7 analysis for the Banker property after the flooding?

8 A. I think it would include these sales, but  
9 maybe not all of them, I think is more fairly stated.

10 Q. Okay. And so for your tables of comparable  
11 transactions after the flood, you've identified that  
12 you -- you used four different categories; there's only  
13 three here. But those four -- four categories were  
14 wet, gutted, remediated, and renovated; is that  
15 correct?

16 A. That's correct.

17 Q. And, Mr. Deal, along that spectrum of  
18 different conditions, you used "wet" to mean that a  
19 house is sold as is; is that correct?

20 A. That's correct.

21 Q. Meaning the floodwaters have receded but  
22 there's no remediation of the property?

23 A. That's correct.

24 Q. And so flood-damaged floors and walls all  
25 remain intact?

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1 A. That's correct.

2 Q. And on the other end of the spectrum, you  
3 used "renovated" to mean that a property has been  
4 gutted, remediated, and repaired to its preflood  
5 condition; is that correct?

6 A. Not -- not necessarily, no.

7 Q. Okay. What do you mean when you use  
8 "renovated" in your report?

9 A. That the property has been returned to be  
10 habitable, that people can actually live there. But we  
11 found oftentimes there was wide ranges of renovation.  
12 So sometimes well beyond what existed prior to the  
13 flood, there's been renovation done. So it's a wide  
14 variety, not -- not just back to what it was, which was  
15 your question. That's not the case.

16 Q. Okay. So there are variations and, in some  
17 cases, there are actually improvements beyond what the  
18 home was before the flood?

19 A. That's correct.

20 Q. And, not surprisingly, I think what you  
21 stated here today, if I understood it and what's in  
22 your market study, the raw sales data indicate that  
23 properties that are sold in the wet or gutted condition  
24 after the flooding sell for less than what you've  
25 identified as similar properties that have been

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1 repaired and renovated; is that correct?

2 A. Not surprisingly, yes.

3 Q. So let's turn in that regard to your market  
4 study for the Stewart property and look at the "after  
5 the flood" table that's on page 10 of your report.

6 And are you at that page, sir?

7 A. I am.

8 Q. Okay. And so, again, this is your comparable  
9 transactions after the flood for the Stewart residence  
10 at 4719 Eagle Trail Drive; is that correct?

11 A. That's correct.

12 Q. And you do list one sale here for a home that  
13 you identify as wet at the time of sale; is that  
14 correct?

15 A. It appears so, yes. And you can see the  
16 price, yes.

17 Q. And that's -- that's No. 9, and that sale  
18 price listing on your table is at \$70,000. And that is  
19 the lowest sale on this table; correct?

20 A. It makes sense. Yes, it is.

21 Q. And the two highest sale prices on the same  
22 table are Sales 1 and 2, which are the two renovated  
23 homes; is that correct?

24 A. That's correct.

25 Q. And what are sales prices of those two

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1 renovated homes as reported in your market study?

2 A. \$195,000 and \$170,000.

3 Q. And if we flip back to page 9, which is your  
4 comparable transactions before the flood also for the  
5 Stewart property.

6 Are you there?

7 A. I am.

8 Q. And you see here that those two postflood  
9 homes that were renovated before their sale both sold  
10 at prices above your listed preflood median and average  
11 price; is that correct?

12 A. That's correct.

13 Q. And so the raw sales prices that you have  
14 included here, at least in Mr. Stewart's neighborhood,  
15 suggest that, once a home is repaired and renovated,  
16 those homes are selling at prices that are comparable  
17 in some respects to preflood prices; is that correct?

18 A. I wouldn't phrase it that way. These --  
19 these are homes that have been -- had significant  
20 renovation. And, in fact, I believe No. 1 on Tumbling  
21 Rapids, granite countertops throughout the house and  
22 bathrooms, major renovations to get it to that price of  
23 a hundred and roughly ninety-five thousand dollars,  
24 major renovations.

25 And so now you've got an essentially new home

1 competing against homes that were built in 1977. You  
2 would expect it to be at a higher price. And so it's  
3 not a fair comparison to say that everything is okay;  
4 it's back to normal.

5 Q. Well, and your report doesn't give us the  
6 details on the level of renovation as to any of the  
7 sales listed here; correct?

8 A. I'm sorry.

9 Q. Your -- in your report and on your tables, we  
10 don't have that detail on the level of renovation in  
11 any of these properties?

12 A. That's correct. It's -- it's available.  
13 It's not -- it's not in this table.

14 Q. But you would agree with me, would you not,  
15 that at least this information indicates that, if flood  
16 damage is repaired and a home is renovated, that the  
17 sale price is going to be higher than if a home is sold  
18 in its wet condition or just a gutted condition?

19 A. I would absolutely agree with that, yes. And  
20 that's evidenced throughout my report.

21 Q. And Mr. Easterby asked you about a -- the  
22 purchase and post-Harvey sale of Ms. Burnham's property  
23 in the Villages of Bear Creek; correct?

24 A. He did.

25 Q. And you were here for Ms. Burnham's



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1 testimony?

2 A. For most of it, yes.

3 Q. For most of it. And she testified, as  
4 Mr. Easterby relayed, that she had purchased the  
5 property, I think it was between 160, \$165,000,  
6 somewhere in that range.

7 A. That's my memory, in 2014 maybe, I believe,  
8 but I don't recall exactly.

9 Q. And she sold it after the Harvey flooding to  
10 Giering Investments for \$80,000; correct?

11 A. Yes, that's correct.

12 Q. Okay. And she testified for us here this  
13 week that she sold the home in gutted condition;  
14 correct?

15 A. That's what I heard, yes.

16 Q. So she had removed the wet walls, floors,  
17 that kind of thing, but had not done any repairs?

18 A. That's my understanding, yes.

19 Q. And, as part of your market study, have you  
20 gone back and looked at the subsequent sale of  
21 Ms. Burnham's former property after it was repaired and  
22 put back on the market?

23 A. I don't recall whether I have that  
24 information. I just don't know.

25 Q. Would you expect, though, if the property had

1     been repaired and then put back on the market, it would  
2     sell for higher than the \$80,000 that Ms. Burnham sold  
3     it to Giering Investments?

4           A.     I would certainly expect that, yes.

5           Q.     And for the Burnham property, again, you have  
6     not done an appraisal that allows you to offer an  
7     opinion of value as to that property immediately before  
8     Harvey, immediately after Harvey, or at a subsequent  
9     date after it was repaired?

10          A.     As I've stated, I have not done that  
11     analysis.

12          Q.     And, sir, your report does not attempt to  
13     ascertain the actual flood damage to any of the five  
14     residential properties that you were asked to look at;  
15     correct?

16          A.     The actual flood damage, it does not, no.

17          Q.     And in this market study, you have not  
18     developed and are not offering opinion on whether there  
19     is a permanent risk of flooding that has an impact on  
20     the market value of these homes; is that correct?

21          A.     I think I'm hearing your question that  
22     would -- that would require Uniform Appraisal Standards  
23     for Federal Land Acquisitions before and after, taking  
24     into consideration project-to-project influence rule,  
25     and a lot of other things. That is an unknowable

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1 question right now, or there's -- there's no way to  
2 answer that question, and I have not done that  
3 analysis.

4 It's -- it's an unknowable -- it's an  
5 unknowable answer. I can't -- you can't get to that  
6 right now today. In this phase, you can't get to that  
7 answer.

8 Q. Well, and as an expert in the Houston area  
9 market, having conducted appraisals here for 30 years,  
10 you have -- you have seen this market, the housing  
11 market in particular, respond to flooding events over  
12 time; correct?

13 A. I have -- I have experienced many flooding  
14 events, and I've seen markets. Yes, I have.

15 Q. And those markets fluctuate immediately after  
16 a flood event, and then that -- there are changes  
17 subsequent to that as the market recovers, as homes are  
18 repaired and put back on the market in repaired  
19 condition; correct?

20 A. There -- there may be. It depends. Every  
21 situation is different. Every property is different.  
22 Every event is.

23 Q. Okay.

24 A. This one is very different.

25 Q. And, again, you have not done the analysis

1 that would allow you to offer an opinion on those  
2 changes in the market immediately after the flood and  
3 in the month subsequent?

4 A. Again, that would require before-and-after  
5 appraisals pursuant to federal guidelines, which can't  
6 be done currently. And we would do that if asked to in  
7 the next phase.

8 Q. I want to ask you a couple of questions about  
9 West Houston Airport. That is identified as one of the  
10 properties you looked at at the beginning of your  
11 report, but you have not actually done one of these  
12 market studies for West Houston Airport; is that  
13 correct?

14 A. We've not done -- one of these sales, before  
15 and after, we have not looked at that, that's correct.

16 Q. And so the conclusions that are stated in the  
17 beginning of your report based on market study don't  
18 apply to West Houston Airport; is that correct?

19 A. Well, as it relates to our understanding that  
20 there was inundation of that property that interfered  
21 with the use -- continued use of the West Houston  
22 Airport, that's a fact.

23 That there was some substantial damage,  
24 physical damage, permanent damage that wouldn't heal  
25 itself, that's a fact.

1           As far as the transactions -- and those are  
2   my opinions as it relates to the West Houston  
3   Airport -- we have not done -- we have not done the  
4   transactions -- before-and-after transaction of  
5   airports specific to your question.

6           Q.    So those opinions, as you framed them with  
7   respect to West Houston Airport, though, are simply a  
8   reiteration of what the Lesikars -- Ms. Stacy Lesikar  
9   and Woody Lesikar -- testified as to the impact of the  
10   floods on their property; correct?

11          A.    That's the first time I've heard them speak  
12   on the issue. I just -- I know what I know about it.  
13   I was there and I saw it. And I think I can provide  
14   that opinion about that issue.

15          Q.    But you haven't done -- for each of the  
16   residential properties, you did what you described here  
17   and we've seen as a market study. You did not do a  
18   market study for West Houston Airport; correct?

19          A.    That's -- that's fair, yes.

20          Q.    I want to turn briefly just to the second  
21   section of your report, which begins on page 13. And  
22   we already looked at page 14, which relates to the  
23   Banker residence.

24                I'll give you a moment to turn there, sir.

25          A.    I'm there.

1 Q. So the second section of the report,  
2 beginning on page 13, includes some information about  
3 each of the six properties that are identified in the  
4 beginning of your report; is that correct?

5 A. That's correct.

6 Q. And we already identified on page 14, for the  
7 Banker residence, you have just a summary of basic  
8 information about that property; correct?

9 A. That's correct.

10 Q. And is that basic information what allowed  
11 you to go out and opine what you've identified as  
12 comparable sales and sale prices in your market study?

13 A. I'm sorry. I'm on page 14.

14 Yes, that -- that provides information  
15 about -- we talked about the size of the property, the  
16 lot size and things of that nature, beds and baths.  
17 This -- this allows you to go into the market and find  
18 the property, find the market area which it's located,  
19 and analyze comparable market data.

20 Q. Okay. And if we turn to page 15, there is  
21 a -- a written area of the Banker property and -- with  
22 a couple of pictures; is that correct?

23 A. That's correct.

24 Q. And that one-page summary with the pictures  
25 was provided to you by counsel; correct?

1           A.    I believe the -- the words were. And the  
2    photographs, we took a bunch of photographs. These may  
3    or may not be photographs provided to us. I don't  
4    remember. But the -- but the written text was provided  
5    to us by counsel.

6           Q.    Okay. And that's true for each of the other  
7    properties in this case that -- to the extent that  
8    there is a written narrative? And let's look at  
9    Ms. Burnham on page 20.

10          A.    Yes. That's correct.

11          Q.    So that narrative was provided to you by  
12    counsel along with those two pictures?

13          A.    I believe those pictures were provided by  
14    counsel. That's correct.

15          Q.    And turning to page 25 and 26 for the Giron  
16    property.

17          A.    Yes.

18          Q.    Is that narrative and picture provided to you  
19    by counsel?

20          A.    Yes, ma'am.

21          Q.    And pages 31 and 32 for the Stewart property,  
22    was that narrative and picture provided to you by  
23    counsel?

24          A.    It was.

25          Q.    And then on pages 37 to 38, again, was that

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1 narrative and pictures provided to you for the Turney  
2 property by counsel?

3 A. It was, yes.

4 Q. And one last one here, on pages 40 --  
5 actually, just on page 43, was that narrative and those  
6 two pictures provided to you for the West Houston  
7 Airport property by counsel?

8 A. Yes.

9 Q. Mr. Easterby asked you a couple of questions  
10 about MLS, or the multiple listing service; is that  
11 correct?

12 A. He did.

13 Q. Do you recall those?

14 A. Yes, I do.

15 Q. And I think he referred to -- it's HAR. Is  
16 that Houston Association of Realtors?

17 A. It is, yes.

18 Q. And are they the group that maintains the MLS  
19 information for this region?

20 A. They are, yes.

21 Q. And you subscribe to that service for the  
22 purpose of being able to access that multiple listing  
23 information?

24 A. We do, yes.

25 Q. And you indicated that you use that in part



1 because Texas is a nondisclosure state?

2 A. Correct.

3 Q. And can you explain to us again what that  
4 means.

5 A. I think Texas is one of a handful of states  
6 in the country where a property -- when the properties  
7 trade, that the buyers and the sellers are not required  
8 to disclose the purchase price. And so I'm not sure  
9 why that it is, but it is. And so we oftentimes,  
10 especially for commercial properties, are required to  
11 find -- go ask people, interview people, hey, what did  
12 you pay for your property?

13 In other states, it's on the deed. It's  
14 literally stamped on the deed what the purchase price  
15 was, just not in Texas.

16 Q. Right. So you can't -- in Texas, neither  
17 Harris County or Fort Bend County, you can't go into  
18 the county records, pull a deed, and get that  
19 information?

20 A. Sometimes it's on it. I've seen it in a deed  
21 sometimes, but it's -- it is a rarity that it's in the  
22 deed.

23 Q. Okay. And there's no tax stamp or anything  
24 that would allow you to calculate back a sale price, as  
25 some other states allow?

1 A. Correct.

2 Q. And the Houston MLS database that you  
3 referred to, that's generally considered to be a robust  
4 and reliable source of sales information; is that  
5 correct?

6 A. For the most part, oftentimes, it is.

7 I found, in this situation, there was --  
8 there was a lot of data that's not in MLS. In this  
9 particular instance with post Hurricane Harvey, there's  
10 a lot of data that's not in MLS.

11 Q. And --

12 A. Which is unusual.

13 Q. Okay. And so, in order to go after  
14 additional sales data that's not reported in MLS, you  
15 would have to go get a copy of the deed out of the  
16 county recorder's office; is that right?

17 A. Not necessarily.

18 Q. Okay. But you would have to take a number of  
19 steps in order to identify the buyer and seller and  
20 then track down the information about that sale,  
21 assuming you can find someone who would talk to you?

22 A. It's what we do. In Texas, appraisers, every  
23 day, we're banging the phones trying to get data of  
24 sale transactions. So you would have to take those  
25 steps.

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1 Q. Sure. And when you're using the information  
2 from the MLS system, that -- the information both about  
3 the sales price, buyer, seller, and even the broker,  
4 that information is listed in MLS and accessible to you  
5 as a subscriber to that service; correct?

6 A. It is, yes.

7 Q. So it makes that process much easier?

8 A. Much easier. That's correct.

9 Q. And based on your 30 years of experience as  
10 an appraiser in this area, you wouldn't expect non-MLS  
11 transactions to be that different from MLS transactions  
12 on an average price; correct?

13 MR. EASTERBY: Objection. Incomplete  
14 hypothetical.

15 Objection. Incomplete hypothetical.

16 THE COURT: Overruled. I think Mr. Deal  
17 understands the import of the question.

18 Mr. Deal, you may answer.

19 THE WITNESS: So the question is I wouldn't  
20 expect the MLS transaction -- or the non-MLS to be that  
21 much different than the MLS transaction. Is that  
22 right?

23 BY MS. TARDIFF:

24 Q. On average.

25 A. As a very general rule, I would agree.

1           In this situation, with the incident that  
2   occurred, with the houses that were inundated,  
3   there's -- there is a ton of non-MLS transactions that  
4   I anticipate are going to be -- show exceedingly  
5   low-level sales prices. So it's different. This is  
6   different than what we typically see in the market.  
7   What's happened here is not normal.

8           Q.   And when you say "different," you're  
9   referring to the fact that, postflooding, a lot of  
10   homes were sold in wet or gutted conditions to  
11   companies such as Giering Investments that were buying  
12   low, repairing and flipping those homes, or were doing  
13   something else with them; correct?

14          A.   And buying to -- to -- to -- individual  
15   buyers, not necessarily investors, but anybody, willing  
16   and knowledgeable buyers and sellers pursuant to the  
17   definitions of market value, there's a lot of sales out  
18   there that are not MLS.

19          Q.   And so you made an important point there  
20   about willing buyers and willing sellers. And another  
21   concept is arm's-length transactions.

22                So if you are looking at non-MLS  
23   transactions, you're also investigating that aspect of  
24   whether they are arm's-length transactions or not and  
25   the circumstances of the sale to assess whether you

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1 could use them in a comparable sales analysis; correct?

2 A. 100 percent agreed, yes.

3 Q. All right. Let me ask you just a few more  
4 questions tying back to USPAP.

5 So you referred to USPAP standards as -- we  
6 were discussing kind of the differences between your  
7 market study and an appraisal; correct?

8 A. Yes.

9 Q. And USPAP Standard No. 2 sets forth certain  
10 reporting requirements for a real property appraisal;  
11 is that correct?

12 A. It does, yes.

13 Q. And those standards identify what I  
14 understand to be two types of written report. There is  
15 an appraisal report; there is also a restricted  
16 appraisal report. Is that correct?

17 A. That's correct.

18 Q. And your market study is neither one of  
19 those; correct?

20 A. It's not an appraisal.

21 Q. Okay.

22 A. So it's not -- so it's neither.

23 Q. Okay. Thank you.

24 And if -- if a written report offers an  
25 opinion of value without setting forth the comparable

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1 sales used to determine that value, that would  
2 necessarily -- that could only be a restricted  
3 appraisal report under USPAP; correct?

4 A. That's correct.

5 Q. And USPAP Standard 2(b) states clearly that a  
6 restricted appraisal report is for client use only; is  
7 that correct?

8 A. I would have to -- I would have to see --  
9 USPAP's about that thick (witness indicating). I don't  
10 remember Standard Rule 2(b) of USPAP specifically.

11 Q. But are there specifications in USPAP with  
12 respect to how a restricted appraisal can be used?

13 A. There are certain limitations on a restricted  
14 appraisal that relate to -- to the needs of a client is  
15 my memory of that issue.

16 Q. And, certainly, if you are asked to do a  
17 restricted appraisal, so you're offering an opinion of  
18 value, a report without including the details as to  
19 your comparable sales, USPAP would require you to  
20 expressly identify that as a restricted appraisal?

21 A. I'm sorry. I lost the first part of that  
22 question.

23 Q. Okay. So if you were preparing an appraisal  
24 report that offers an opinion of value without  
25 including -- that comparable sales analysis does not

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1 include each of the comparable sales transactions that  
2 you used and the adjustments that you made, that type  
3 of report would be a restricted appraisal report; is  
4 that correct?

5 A. I believe it would, yes.

6 Q. And USPAP requires that you expressly  
7 identify that kind of report as a restricted appraisal?

8 A. USPAP -- I believe it does, yes.

9 There's a lot of USPAP in the Yellow Book as  
10 well. I'm not sure 100 percent about the ability to  
11 use a restricted use -- or restricted appraisal for the  
12 federal guidelines. But what you're describing in  
13 Texas, that would be a -- that would be a restricted  
14 appraisal, I believe, yes.

15 Q. And the report would have to be identified as  
16 such; correct?

17 A. I believe so. Based on my memory, I believe  
18 so.

19 Q. And you would -- certainly, if you were  
20 preparing a restricted appraisal report, in your 30  
21 years of professional experience, you would identify it  
22 as such for the client; correct?

23 A. I would be required to. I would -- which we  
24 do sometimes, and we do identify it as such at the --  
25 it's a client-driven request to do a restricted

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1 appraisal.

2 MS. TARDIFF: Let me just take one moment,  
3 Your Honor.

4 THE COURT: Yes.

5 MS. TARDIFF: I have no further questions at  
6 this time. Thank you.

7 Thank you, Mr. Deal.

8 THE COURT: Thank you, Ms. Tardiff.

9 Mr. Easterby, redirect?

10 MR. EASTERBY: Yes, Your Honor.

11 REDIRECT EXAMINATION

12 BY MR. EASTERBY:

13 Q. Mr. Deal, you talked about this being an  
14 unusual situation with regard to those non-MLS  
15 transactions. You recall that?

16 A. Yes.

17 Q. Could you just expound on that very briefly.  
18 What did you mean by that?

19 A. So we looked at -- in looking at another  
20 report that was done, looking at only MLS sales done by  
21 a government-hired expert, looked at some  
22 transactions -- 150 transactions within a certain area  
23 of the test properties. There was equally as many  
24 non-MLS transactions that occurred that were not part  
25 of that analysis.



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1                   And so that's -- that is a lot of data that's  
2     out there, but it's -- it's missing. It's not in the  
3     information that was supplied to us. So it's not MLS  
4     data.

5           Q.     And in terms of data, did you and your team  
6     do a lot of research on those underlying transactions?

7           A.     We did do a lot of research, yes.

8           Q.     I don't remember the volume of what was  
9     produced, but do you have an understanding as to how  
10    many pieces of paper it was?

11          A.     I don't know. Boxes.

12          Q.     Boxes and boxes. And those were all produced  
13    to the government in this case; correct?

14          A.     Yes, they were.

15          Q.     So, after Harvey, in doing all this research  
16    and investigation with your team, did you find that a  
17    lot of folks were just doing the "for sale by owner"  
18    sign in their yard, not MLS?

19          A.     There was quite a bit of that, yes.

20          Q.     And was that particularly prevalent in those  
21    communities that didn't have any flood insurance?

22          A.     It was very prevalent, yes.

23          Q.     And so those would not be on MLS?

24          A.     They would not.

25          Q.     And do you believe that, if you were to take

1 the next step and go to the appraisal, that those  
2 should be considered in selecting comparable  
3 properties?

4 A. They would -- they would need to be  
5 considered, looked at, analyzed, and adjusted.

6 Q. Okay. I want to just step through -- oh,  
7 before I ask you that, are you aware -- are you aware  
8 of any legal requirement in Texas that requires that  
9 the seller disclose that a house is in the Addicks or  
10 Barker reservoir pool area?

11 A. I am not aware of any requirement, no.

12 Q. Let's look at your report again. Counsel  
13 asked you some questions about the Bankers. Do you  
14 recall that?

15 A. Yes.

16 Q. Turn with me, if you would, to page 3.

17 And, Matt, if you could put up that table,  
18 please, on page 3 of what's been marked for  
19 identification as Plaintiffs' Exhibit 2205.

20 So I would like to look at the column that  
21 says "GLASF." What does that stand for?

22 A. It's gross leasable area and described in  
23 square feet.

24 Q. Okay. And next to that on the left is  
25 "PSFGLA." What does that stand for?

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1           A.     That's the price per square foot of the  
2     residence based on the sale price divided by the gross  
3     leasable area.

4           Q.     And in your experience is price per square  
5     foot kind of the big metric when you're looking at home  
6     values in this area?

7           A.     It is certainly one of the metrics, yes.

8           Q.     Right. So counsel, I think, was trying to  
9     say that this one down here -- or up here that's  
10    \$715,000 was the highest one?

11          A.     That's correct. It is the highest gross  
12    price, yes.

13          Q.     What's its price per square foot?

14          A.     \$142.54.

15          Q.     Is there a property on this that's got a  
16    higher price per square foot than that?

17          A.     There is.

18          Q.     Which one is that?

19          A.     No. 4.

20          Q.     Okay. That's 146; correct?

21          A.     Correct. 146.55.

22          Q.     So, you know, bigger house, it makes sense  
23    it's going to cost more. But price per square foot is  
24    important?

25          A.     That's why you look at per-square-foot prices

1 as a metrics, because it normalizes the prices paid.

2 Q. So this is the -- before the flood, you guys  
3 have a median price per square foot of -- what's that  
4 number right there, please?

5 A. Median at 524,000, or 129, roughly, dollars  
6 per foot.

7 Q. 129 a foot.

8 If you turn the page, I think you'll look at  
9 the after. And I'd like to just look again at the  
10 median down there.

11 What's the median on the price per square  
12 foot?

13 A. \$111.77.

14 Q. All right. So before, 140 -- well, it's in  
15 the record. Let's keep moving.

16 Let's go to Bear Creek, which I believe is in  
17 the context of the Burnham residence, page 5 of your  
18 report.

19 Please again look at the median down there  
20 before the flood. What's the price per square foot on  
21 the median?

22 A. \$79.71.

23 Q. And, in that neighborhood, is it correct that  
24 those are mostly one-story kind of 1960s ranch houses,  
25 as we call them around here?

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1           A.     Well, they're actually considered newer  
2     construction, the far right column. They're -- this  
3     particular subdivision, Section 11, is mid '80s, early  
4     '90s, the construction.

5           Q.     Understood.

6                     Okay. And then the after, which is the next  
7     page, what was your median price per square foot?

8           A.     \$46 a foot, \$46.07.

9           Q.     So it went from about 80 to about 46?

10          A.     That's correct.

11                    And all those homes are in the same section  
12     of Bear Creek Village.

13          Q.     And let's look, if you would, at page 9,  
14     which is in the context of the Stewarts' home there on  
15     Eagle Trail Drive.

16                    On the before, what's your median price per  
17     square foot?

18          A.     \$83.25.

19          Q.     And on the after, what's your median price  
20     per square foot?

21          A.     \$45.11.

22          Q.     How would you characterize that kind of  
23     difference in price per square feet?

24          A.     Severe, a striking difference.

25          Q.     Now, do you believe or have any opinions as

1 to whether you think the market participants that are  
2 buying homes behind the Addicks and Barker reservoirs  
3 understand the risk associated with being submerged by  
4 impounded flood-offs -- floodwater by the federal  
5 government?

6 MS. TARDIFF: Objection. Beyond the scope of  
7 the cross and outside the scope of his report.

8 THE COURT: Just a moment. Let me think  
9 about that a minute.

10 We've had testimony about the abnormal market  
11 conditions and the cause. And the Court had a couple  
12 of questions, but I have avoided asking them.

13 I will allow the question because I think the  
14 general topic has been introduced, not just by  
15 Mr. Easterby's direct, but by your cross-examination,  
16 Ms. Tardiff.

17 MR. EASTERBY: If I may, Judge, I'll lay a  
18 little more foundation just to be fair to the witness.

19 BY MR. EASTERBY:

20 Q. Counsel for the government asked you some  
21 questions about the houses that had been fully -- did  
22 you call them remediated?

23 A. Renovated.

24 Q. -- renovated and sold at higher prices. Do  
25 you remember that?

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1 A. Yes.

2 Q. And so the question again is do you have any  
3 opinions or understanding as to whether the market  
4 participants that are buying homes behind Addicks and  
5 Barker had an understanding of the risks of being  
6 submerged by runoff impounded by the federal  
7 government?

8 A. I think there is a significant deficiency in  
9 market knowledge as to what -- what -- on those issues.

10 Q. All right. Fair enough.

11 Oh, last question. You didn't have any  
12 comparable transactions for the airport?

13 A. That's correct.

14 Q. Are there a lot of airport sales?

15 A. No, there's not.

16 Q. Okay. Thank you. No further questions.

17 THE COURT: Ms. Tardiff?

18 MS. TARDIFF: Just a couple.

19 THE COURT: Yes.

20 RECROSS-EXAMINATION

21 BY MS. TARDIFF:

22 Q. So, Mr. Deal, Mr. Easterby asked you a few  
23 follow-up questions about the before-and-after tables  
24 in your market study. Do you recall those?

25 A. Yes.

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1 Q. And those questions focused on the  
2 differential in price per square foot before and after  
3 based on the -- that raw sales data; correct?

4 A. And a couple of questions about gross price,  
5 but yes.

6 Q. And focusing on that, the  
7 price-per-square-foot comparison in your after tables,  
8 as you described to us, those after tables include raw  
9 sales prices for homes that are wet, gutted, remediated  
10 only, and renovated. You have all four categories in  
11 that after; correct?

12 A. That's correct.

13 Q. And so your report of low, high, average, and  
14 median raw sales prices in the after table includes all  
15 those variations; correct?

16 A. They do, yes.

17 Q. With no adjustments?

18 A. That's correct.

19 Q. The last set of questions that Mr. Easterby  
20 asked you were with respect to risk and your opinion on  
21 whether market participants have an understanding of  
22 risks associated with Addicks and Barker; is that  
23 correct?

24 A. That's correct.

25 Q. Do you recall that?



1 But you have not done any study -- well,  
2 first of all, you have not done any survey of market  
3 participants to assess their understanding of risks;  
4 correct?

5 A. We have talked to brokers and agents in the  
6 marketplace about that issue, which revealed a lack of  
7 full understanding of what's in store for the future as  
8 it relates to properties that are in proximity to the  
9 what we're talking about.

10 Q. Okay. But your discussion with some brokers,  
11 that's not a survey of all brokers, and it's not a  
12 survey of buyers and sellers in this marketplace;  
13 correct?

14 A. It is not a market survey to all -- to all  
15 agents. It is not. It is the type of information that  
16 we utilize in assessing situations like this. And we  
17 talk to a lot. There's a lot of questions as to what  
18 this all means for the future.

19 Q. But you also -- you have not done a study in  
20 connection with this case, whether it's a survey or  
21 another type of study, that allows you to opine on the  
22 understanding of market participants as to flood risk;  
23 correct?

24 A. I don't agree. I think part of -- part of  
25 what we've done in our research is a study as it

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1 relates to that. As part of our conversations with --  
2 with market participants, which is typical for what we  
3 do, we have made those inquiries, we've -- we've asked  
4 questions about that, and we've gotten answers about  
5 it.

6 Q. And none of that is reported, though, in your  
7 expert report here in this case; correct?

8 A. I agree. It's not.

9 MS. TARDIFF: Thank you.

10 THE COURT: Mr. Easterby.

11 MR. EASTERBY: Your Honor, I just would like  
12 to move to admit Plaintiffs' Exhibit 2205 into  
13 evidence.

14 THE COURT: All right.

15 MS. TARDIFF: Thank you, Your Honor. We  
16 maintain the same objection as to the lack of a  
17 methodology as to the market study.

18 THE COURT: That objection is not well taken.  
19 PX2205 is admitted.

20 (Whereupon, Plaintiffs' Exhibit 2205 was  
21 admitted into evidence.)

22 THE COURT: Now, we have a rebuttal report.  
23 What happened with that?

24 MR. EASTERBY: Your Honor, that addresses  
25 Mr. Landry's work. And, candidly, I think that

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1 Mr. Bell already handled that -- or Dr. Bell. So in  
2 the interest of saving time, we'd like to reserve that  
3 for the rebuttal phase of the case if necessary.

4 THE COURT: Okay. Thank you, Mr. Easterby.  
5 May the Court excuse Mr. Deal?

6 MR. EASTERBY: Yes, sir.

7 THE COURT: Mr. Deal, thank you for your  
8 patience. You've heard a lot of testimony in this  
9 case.

10 THE WITNESS: Thank you, Your Honor.

11 THE COURT: And the Court appreciates you  
12 coming today and testifying.

13 THE WITNESS: Thank you.

14 THE COURT: Thank you.

15 MR. CHAREST: Sir, we're about to rest, but I  
16 want to address a few open issues vis-a-vis the record.

17 THE COURT: Yes.

18 MR. CHAREST: Before we do that, we still  
19 have to do an exchange and submission of the site visit  
20 images, which is underway. We're coordinating with  
21 that now. We're also going to the -- the parties are  
22 going to be doing a comparison of admitted exhibit  
23 lists to make sure that -- if there's any true-ups that  
24 need to be done vis-a-vis the record.

25 THE COURT: I have a point that I will raise

1 about that when we discuss the exhibits generally. I  
2 will say that, ordinarily, the Court would ask the  
3 reporter to take into the reporter's possession the  
4 exhibits that have been admitted and to certify them  
5 along with the transcript as part of record in the  
6 case. And the Court ordinarily would transmit itself,  
7 collect and transmit, the exhibits that were provided  
8 to the Court and clerk.

9 But we're not going to do that in this case.  
10 And that's what I'm going to ask Ms. Lisa Eddins, who's  
11 the scheduler, to address when we come back from our  
12 break.

13 MR. CHAREST: That's completely satisfactory,  
14 sir. Thank you.

15 And the only other issue after that is -- and  
16 I think you probably will address it after the break --  
17 was we were going to suggest a submission of an agreed  
18 volume or something like that. But I -- we'll hear  
19 what the Court has to say after the break.

20 THE COURT: The submission of what?

21 MR. CHAREST: An agreed volume of "here are  
22 the exhibits" that we're all -- that we're all on the  
23 same page with.

24 THE COURT: Ordinarily, the Court is pretty  
25 persnickety -- I'm going to use that word -- about

1 what's in the record and what's not. That's why we've  
2 tried to keep very careful track of admitted exhibits.

3 But, in any event, in this instance, we have  
4 so many -- we have thousands -- we're going to have to  
5 do something a little different.

6 MR. CHAREST: Yes, sir. All right. Well,  
7 subject to those open issues, Your Honor, the  
8 plaintiffs rest. Thank you.

9 THE COURT: All right. Thank you.  
10 Ms. Tardiff.

11 MS. TARDIFF: Yes, Your Honor. Before we  
12 call our first witness, we do have a motion to make.

13 THE COURT: You have what? A motion to make?

14 MS. TARDIFF: A motion to make. And I will  
15 turn it over to Mr. Shapiro to make it.

16 MR. SHAPIRO: Thank you, Your Honor.

17 At this point plaintiffs have rested but for  
18 the introduction of a few photographs taken from the  
19 site visit. So we would move for a directed verdict on  
20 three grounds. First, plaintiffs claims fail --

21 THE COURT: You're invoking 52(c)?

22 MR. SHAPIRO: Yes, sir.

23 THE COURT: All right. Thank you.

24 MR. SHAPIRO: Plaintiff's claims fail because  
25 a one-time temporary flood event resulting from the

1 largest storm to ever hit the United States cannot  
2 establish a taking.

3 In Ridge Line, the federal circuit stated  
4 that plaintiff must show that "the government's  
5 interference with any property rights was substantial  
6 and frequent enough to rise to the level of taking."

7 They continue to state that "isolated  
8 invasions, such as one or two floodings, did not make a  
9 taking, but repeated invasions of the same type have  
10 been held to result in an involuntary servitude."

11 Under that case law and other cases cited to  
12 it, we believe plaintiffs have failed to stake a claim  
13 upon which relief can be granted.

14 Secondly, plaintiffs' claims fail because the  
15 Corps' actions here were an exercise of governmental  
16 power to prevent loss of life and mitigate inevitable  
17 damages to private properties. In cases such as Miller  
18 v. Schoene, the government action here was -- and there  
19 was taken in an effort to reduce or mitigate inevitable  
20 harms to the public and no viable takings claim exists.

21 And then, finally, plaintiffs' claims fail  
22 because plaintiffs' lack of defensible property right  
23 to be free of floodwaters during storms generated  
24 during a massive hurricane, particularly one like  
25 occurred in August of 2017.

1                   During a four-day stretch, as the Court has  
2   heard, Hurricane Harvey dropped an unprecedented amount  
3   of rainfall on Harris and Fort Bend counties. No land  
4   owner in a flood-prone region like this has a  
5   compensable property right to be free of such  
6   floodwaters.

7                   Thank you, Your Honor.

8                   THE COURT: These objections and the motion  
9   under Rule 52© are essentially a reprise of the  
10   motion to dismiss that was made earlier in the case.  
11   And we denied the motion to dismiss and remitted the  
12   case for trial, and the Court adheres to that view.

13                   This is admittedly an unusual situation, but  
14   on the other hand, we've had a lot of testimony about  
15   whether or not this is likely to recur based on recent  
16   storms and history of storms in the Houston area and  
17   the Gulf generally.

18                   So the Court will deny the motion.

19                   MR. SHAPIRO: Thank you, Your Honor.

20                   THE COURT: Thank you.

21                   We're a little early, but we might take our  
22   morning break at this point.

23                   Mr. Shapiro and Ms. Tardiff, is that  
24   satisfactory to you?

25                   MR. SHAPIRO: Yes, sir.

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1 THE COURT: It is?

2 Mr. Charest?

3 MR. CHAREST: Yes, sir. Thank you.

4 THE COURT: Thank you. We are in recess for  
5 15 minutes.

6 THE CLERK: All rise. Court is in recess.

7 (Whereupon a short recess was taken.)

8 THE CLERK: All rise. United States Court of  
9 Federal Claims now is in session, the Honorable Charles  
10 F. Lettow presiding.

11 THE COURT: Please be seated.

12 Court had a quick question to Mr. Charest and  
13 Mr. Shapiro.

14 Could Ms. Eddins get an indication of what we  
15 have in mind?

16 MR. CHAREST: Yes, sir. The understanding is  
17 that the parties will submit jointly two clean copies  
18 of everything that's been admitted to the Court's  
19 chambers and one --

20 THE COURT: No. The idea is that you will  
21 ship all of the materials that you provided at the  
22 outset of trial back to chambers.

23 MR. CHAREST: Admitted and not admitted; is  
24 that correct?

25 THE COURT: That's correct. We can sift and



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1 sort. And so we're going to ask you to do that. We  
2 have two sample shipping labels, because we'd like them  
3 shipped back to our chambers now.

4 And did Ms. Eddins cover when this exercise  
5 should occur?

6 MR. SHAPIRO: Yes, sir. I think she -- she  
7 indicated that it should be done within a week and that  
8 we would be able to take care of that still on Friday  
9 afternoon or Saturday, perhaps, if necessary.

10 THE COURT: Or even Monday --

11 MR. SHAPIRO: Yes, sir.

12 THE COURT: -- for the week, because it  
13 happens that the chief judge and I will be in the same  
14 place Monday and Tuesday, but in Washington. So the  
15 chief judge will not need this courtroom certainly  
16 Monday or Tuesday. I don't think Wednesday either.

17 But then did Ms. Eddins cover with the court  
18 reporter what would happen with the certified admitted  
19 exhibits?

20 MR. CHAREST: I'm nervous to say yes because  
21 what she told us is different than what you're telling  
22 us now.

23 THE COURT: Let's hear what you think she  
24 said.

25 MR. CHAREST: I thought we were supposed to

1 prepare one agreed list, one submission of a clean set  
2 of exhibits to the -- to the clerk of the federal  
3 circuit -- federal --

4 THE COURT: Through the court reporter,  
5 because the court reporter will have to certify. And  
6 that would be, then, shipped to the clerk of the court.

7 MR. CHAREST: We can do that, sir.  
8 Absolutely. We'll coordinate with the court reporter.

9 THE COURT: You will have to work with  
10 Ms. Clark to arrange for that.

11 MR. CHAREST: Can do. Yes, sir.

12 THE COURT: You can do that.

13 MR. CHAREST: Yes, sir. We'll make it work.

14 THE COURT: It's just, ordinarily, when we  
15 have an out-of-town trial, we do not have the volume of  
16 exhibits that we have in this particular case, and it's  
17 posing a particular problem for us.

18 MR. CHAREST: So to clarify, if it's all  
19 right with the Court, everything that we've submitted  
20 to the Court has -- either the clerk has or the Court  
21 has one -- the Court wants boxes sent back as is.

22 THE COURT: That's exactly right. Those that  
23 you provided, the two sets that you provided, just  
24 ship -- don't bother to sift and sort. We can do that.  
25 Because the admission of exhibits is covered by the

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1 transcripts anyway. We have our lists, obviously, and  
2 you have your lists. And we almost -- I can't remember  
3 the last time we had a conflict or had to correct the  
4 record. I just -- we just don't do that.

5 MR. CHAREST: And so we'll send back the hard  
6 copies of -- that the Court has received already, and  
7 then we will work on making sure that we have an  
8 agreed -- a list that we both concur with, and then  
9 we'll supply a clean set of each one of those to the  
10 court reporter for certification.

11 THE COURT: Well, usually, we actually ask  
12 that the set -- that the court reporter, essentially,  
13 certifies being that that's used by the -- the  
14 witnesses, not necessarily a clean set.

15 MR. SHAPIRO: Yes, sir.

16 THE COURT: Right.

17 MR. CHAREST: That may or may not be  
18 possible. There's some times when we just --  
19 electronic version was posted, for example. You see  
20 what I mean?

21 THE COURT: Well, we do -- we do have the  
22 thumb drives and some electronic versions, and that can  
23 be included.

24 MR. SHAPIRO: Yes, sir.

25 THE COURT: Is that helpful?

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1 MR. SHAPIRO: It is.

2 THE COURT: We want to sort this out now  
3 while we're talking with each other so we all  
4 understand what's happening.

5 MR. SHAPIRO: I think that makes sense, Your  
6 Honor, and it will avoid the necessity of having to  
7 reprint thousands of exhibits.

8 THE COURT: Oh, you don't want to do that.

9 MR. SHAPIRO: Yes, sir.

10 THE COURT: The Court's paper suppliers would  
11 be welcome -- or would welcome that development, but we  
12 should not do that.

13 MR. SHAPIRO: Yes, sir.

14 THE COURT: That's why you might have a day  
15 or so, either -- Saturday's going to be difficult, but  
16 Monday or Tuesday of next week to -- to do -- do what  
17 you need to do.

18 MR. CHAREST: We will have Mr. Bynum,  
19 probably, sounds like a lawyer, down here on Monday to  
20 coordinate that to make sure.

21 THE COURT: I don't think we've had any  
22 situation where a witness has marked on exhibits or  
23 anything like that. But, still, we really do want the  
24 copies that the witness has used just to avoid any  
25 questions.

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1 MR. CHAREST: I worry that we -- there may be  
2 gaps in what the witness was presented and what's still  
3 in the binders just over the course of time.

4 THE COURT: You can work that out.

5 MR. CHAREST: Thank you, sir. All right.  
6 Fair enough.

7 THE COURT: I hope.

8 Now, we do have -- as you mentioned,  
9 Mr. Charest, and as Mr. Shapiro knows, you have --  
10 well, I saw Ms. Tardiff taking photographs -- you have  
11 a set of photographs of the test properties that you  
12 are agreed will be presented to the Court; right? And  
13 you're going to do that within the next several days.

14 MR. CHAREST: We -- yes, sir. We're going  
15 to -- we are going to supply to the government the  
16 photos that we took from the test properties that  
17 they're going to supply us. My understanding is we'll  
18 combine them all and submit to the Court in some form  
19 of record.

20 THE COURT: Yes.

21 Mr. Shapiro?

22 MR. SHAPIRO: Yes, sir. And we'll aim to do  
23 that at the same time that we -- we send back the other  
24 exhibits to the Court.

25 THE COURT: Okay. Is there a way to identify

1     them on the record before we actually close the trial?

2                 MR. CHAREST: I think so. We can do it any  
3     number of ways. Since they're all electronic, we can  
4     just put them -- all the photos on a thumb drive and  
5     label that one thing the number. And we can probably  
6     assign individual, you know, identifiers to the file  
7     names. That's probably the easiest.

8                 THE COURT: Can the two of you work that out.

9                 MR. CHAREST: Yes, sir.

10                MR. SHAPIRO: We can work that out. One  
11     question I had, it seems like we could call it a joint  
12     demonstrative exhibit?

13                THE COURT: Yes.

14                MR. SHAPIRO: Do you think it would be  
15     helpful to the Court to individually identify each page  
16     number, or is that not necessary?

17                THE COURT: I don't think it's necessary. I  
18     think it's -- it would be very, very helpful to  
19     identify the particular property involved or the owner  
20     of the property.

21                MR. CHAREST: We can do that, sir. We can  
22     bring it up in terms --

23                THE COURT: You could do that, that would  
24     ease matters considerably.

25                MR. CHAREST: We can -- we can name them by,

1     like, whatever stop we're at. Like, the Giron with the  
2     home and then number it there. We can do that.

3             THE COURT: Just use the home.

4             MR. CHAREST: Yes, sir.

5             MR. SHAPIRO: That should not be a problem.

6             MR. CHAREST: Actually, we do. I have an  
7     idea. We'll get it done.

8             THE COURT: All right. Great.

9             Mr. Easterby.

10            MR. EASTERBY: I just had a suggestion on  
11     that point, Your Honor. You saw we had the file name,  
12     date, time, and GPS embedded in some of those photos.  
13     That might be a way to give the Court a good  
14     identification as to where the place was. You can even  
15     have a little map embedded in there that shows where it  
16     was.

17            THE COURT: Well, that might be true, but  
18     what we have to do, then, is take the GPS coordinates  
19     and translate that to the property. We'd rather not  
20     have to take the time to do that.

21            MR. EASTERBY: Yes, sir.

22            MR. CHAREST: We'll just -- we'll folder the  
23     images on the drive by property location. That's the  
24     easiest way.

25            THE COURT: All right.

1 Mr. Shapiro?

2 MR. SHAPIRO: Yes, sir.

3 THE COURT: Is that okay with you?

4 MR. SHAPIRO: That is satisfactory.

5 THE COURT: All right. Thank you.

6 All right. Let's proceed. Mr. Shapiro.

7 MR. SHAPIRO: There is one sort of  
8 housekeeping issue, Your Honor. After Mr. Long's  
9 testimony, he was kept under oath subject to recall.  
10 We do not intend to introduce any more of the Facebook  
11 video that the Court saw.

12 So with the Court's permission, I think he  
13 can be relieved from being recalled.

14 THE COURT: He's a local person, though, so  
15 it's not quite the problem that we have had with some  
16 other witnesses. Let's --

17 Mr. Charest.

18 MR. CHAREST: We're satisfied. As long as  
19 that video is in the record, which I understand it is,  
20 we don't need more or less, and we don't need Mr. Long  
21 anymore.

22 THE COURT: Mr. Long is excused.

23 MR. SHAPIRO: Thank you, sir.

24 THE COURT: That will help.

25 Ms. Duncan, are you next?



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1 MS. DUNCAN: Yes, sir. United States calls

2 Mr. Les Hansmann.

3 THE COURT: I'm sorry. You have to say it  
4 again.

5 MS. DUNCAN: Mr. Les Hansmann,  
6 H-a-n-s-m-a-n-n.

7 THE COURT: Mr. Hansmann, if you would  
8 approach the bench to be sworn as a witness, that would  
9 be helpful.  
10 Thereupon--

11 LESLIE HANSMANN,  
12 was called as a witness, and having been first duly  
13 sworn, was examined and testified as follows:

14 THE WITNESS: I do.

15 THE COURT: If you would be seated in the  
16 witness stand, that would be helpful.

17 MS. DUNCAN: May I proceed?

18 THE COURT: Yes.

19 DIRECT EXAMINATION

20 BY MS. DUNCAN:

21 Q. Please introduce yourself.

22 A. Yes. My name is Les Hansmann.

23 Q. Mr. Hansmann, who do you work for?

24 A. I currently work for the United States  
25 Geologic Survey.

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1 Q. Is that also known as USGS?

2 A. Yes.

3 Q. Okay. And where do you work -- or where are  
4 you located?

5 A. I am located in Rolla, Missouri.

6 Q. Okay. And what do you do for USGS?

7 A. My current job is the section chief for the  
8 cartographic products section.

9 Q. And as section chief for the cartographic  
10 product section, what are your primary job  
11 responsibilities?

12 A. So my main job is to oversee the production  
13 of the United States geological topographic map.

14 Q. We're going to ask -- we're going to talk  
15 some more about the U.S. geological survey topographic  
16 map, but how long have you served in this role as  
17 section chief?

18 A. For the past four years.

19 Q. Okay. And how long have you been with USGS  
20 in total?

21 A. 31 years.

22 Q. Okay. And so before becoming section chief,  
23 what work did you do for the USGS?

24 A. So prior to being a section chief, I was the  
25 frontline supervisor for the same section, overseeing

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1 the production of the topographic maps.

2 And then, prior to that, I was in the  
3 research and development section where we did --  
4 researched and developed a current U.S. topographic  
5 map.

6 Q. What is a USGS topographic map?

7 A. So a topographic map is a map of 1-to-24,000  
8 scale. We make these for the whole United States and  
9 its territories. It covers an area of 7.5 minutes of  
10 latitude by 7.5 minutes of longitude. So ...

11 Q. Okay. And how long has USGS been creating  
12 topographic maps?

13 A. 140 years.

14 THE COURT: Ms. Duncan, may I ask a question  
15 quick?

16 MS. DUNCAN: Yes, sir.

17 THE COURT: Mr. Hansmann, are these the  
18 quadrangle maps?

19 THE WITNESS: Yes, sir.

20 THE COURT: In ordinary parlance, that's what  
21 they're called. Thank you.

22 MS. DUNCAN: And we'll be looking at some of  
23 those in just a few moments.

24 BY MS. DUNCAN:

25 Q. Mr. Hansmann, how frequently are the USGS

1 topographic maps updated?

2 A. So since 2010 they are updated every three  
3 years.

4 Q. Okay. And how about prior to 2010?

5 A. Prior to 2010 it was pretty infrequent  
6 because of the number of hours that it took to produce  
7 one of these, and funding was also a major problem in  
8 the past.

9 Q. Okay. So let's break that down. What  
10 happened in 2010 that made it such that you updated  
11 them every three years?

12 A. So in 2010 we started making an electronic  
13 version of the U.S. topographic map and providing it  
14 free for download from the internet.

15 Q. Okay. And how are the digital versions of  
16 those maps created?

17 A. Using GIS software and computers.

18 Q. Okay. Now, prior to 2010, you mentioned that  
19 the maps took a lot of time.

20 A. Yes.

21 Q. How were they created?

22 A. So the way the production process was prior  
23 to 2010, it took a lot of hand-scribing. So normally  
24 what would be done is an area would be identified for a  
25 project, aerial photography would be acquired over that

1 area, then a field crew would be assigned to go down  
2 and identify features and make notes on the aerial  
3 photographs. And then all of that material would be  
4 sent back to the -- the mapping centers for production.

5 Q. Does your office maintain current and  
6 historic versions of the USGS topographic maps?

7 A. Yes, we do.

8 Q. And are you familiar with USGS topographic  
9 maps around the Addicks and Barker reservoirs?

10 A. Yes, I am.

11 Q. Okay. I'd like to turn your attention to  
12 four exhibits -- DX744, 745, 741, and 747.

13 Now, to do this efficiently, I have them  
14 printed up as what we're going to mark as Defendants'  
15 Demonstrative 4.

16 MS. DUNCAN: And, Your Honor, I have a stack  
17 of demonstratives that I'd like to pass out. These are  
18 simply replicas of the actual exhibits. So, after  
19 discussion, I intend to move the substantive exhibits  
20 into evidence.

21 THE COURT: Could you identify the exhibits  
22 again? It's DX744, 745 --

23 MS. DUNCAN: 741 and 747.

24 THE COURT: Thank you.

25 MS. DUNCAN: And may I approach?

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1 THE COURT: Yes. Certainly.

2 MS. DUNCAN: And this is a stack of seven  
3 different demonstratives. We'll move through them  
4 through the course of the exam.

5 BY MS. DUNCAN:

6 Q. Mr. Hansmann, looking at the four exhibits in  
7 front of you, what are these exhibits?

8 A. So this is a -- four different versions of  
9 the same quadrangle.

10 Q. And what is the title of this quadrangle?

11 A. So if we could zoom into the bottom  
12 right-hand corner of the very left map.

13 Q. This is DX744. Go ahead.

14 A. So this is the Addicks, Texas, quadrangle.  
15 It was published in 1970.

16 Q. And, on USGS topographic maps, where can the  
17 title and the date be found?

18 A. So on every USGS product, they will always  
19 have the map title and the date that it was published  
20 in the lower right-hand corner.

21 Q. Okay. Let's go through each of these and  
22 identify the date.

23 Let's move to the next map, DX745. What's  
24 the date for this map?

25 A. So this is a 1970 version map, and it was

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1 photorevised in 1980.

2 Q. How about the date for DX741?

3 A. This is a 1995.

4 Q. Okay. And how about the date for DX747?

5 A. It's 2016.

6 Q. And who produced these four exhibits sitting  
7 before you?

8 A. All of these were produced by the USGS.

9 MS. DUNCAN: Your Honor, the United States  
10 offers Defendants' Exhibit 744, 745, 741, and 747 into  
11 evidence.

12 MR. VUJASINOVIC: No objection.

13 THE COURT: Thank you. Admitted.

14 (Whereupon, Defendants' Exhibits 744,  
15 745, 741, 747 were admitted into  
16 evidence.)

17 BY MS. DUNCAN:

18 Q. Mr. Hansmann, you referred to this map as a  
19 quad. And, indeed, that's what the Court asked you  
20 about as well.

21 What do you mean when you use the word  
22 "quad"?

23 A. So back -- years ago, the USGS went through  
24 and divided up the country and its territories by 7 ½  
25 minutes of latitude and 7 ½ minutes of longitude.

1 Since it's the same measurements on all four sides, we  
2 call it a quadrangle.

3 Q. So is there a quad for the entire United  
4 States?

5 A. Yes, and its territories.

6 Q. Okay. Now, using these maps before us as an  
7 example, can you give us an overview on how to read  
8 these quads?

9 A. Yes. So USGS used colors and -- and symbols  
10 to identify features on the maps. So, for instance, we  
11 would use blue to identify surface water. We would use  
12 the color green to identify vegetation on the maps.  
13 And then red would normally be used for transportation  
14 features, some cultural features. And then black as  
15 well would be used.

16 Q. Okay. I have a few questions about some of  
17 the details on these maps.

18 Let's zoom into the far left map, DX744.

19 If you look in the -- at the top left corner,  
20 I notice there are some lines going diagonally all the  
21 way down the page, and they have numbers in them.

22 Mr. Jackson, can you zoom in.

23 Okay. Mr. Hansmann, are you familiar with  
24 what I'm talking about?

25 A. Yes, I am.



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1 Q. You know what? Why don't I give you a  
2 pointer. Just so that we're all talking about the same  
3 thing, let's point this out.

4 MS. DUNCAN: Your Honor, may I approach?

5 THE COURT: Yes.

6 BY MS. DUNCAN:

7 Q. Mr. Hansmann, can you point out those lines I  
8 was asking you about.

9 A. So I believe you're talking about these lines  
10 that go up and down here and across here.

11 Q. Well, I wasn't, but what are those?

12 A. Oh, those are actually the Universal  
13 Transverse Mercator grid lines.

14 Q. And then there are also some brown squiggly  
15 lines that are going in a diagonal pattern down the  
16 side of the map.

17 A. Oh, yes. Those are elevation contours.

18 Q. And what are the numbers that are included on  
19 each of those contours?

20 A. So those are the elevations at that point.

21 Q. Okay.

22 How frequently are those contours indicated  
23 on the map?

24 A. It's quite often. I don't remember the exact  
25 distance that we place those numbers.

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1 Q. What is the distance between the elevation  
2 contour lines?

3 A. So, on this map, I'm pretty sure it's a  
4 5-foot contour interval.

5 Q. Now, taking a step back to the --

6 THE COURT: Ms. Duncan, it depends on whether  
7 you're looking at a steep mountain or not.

8 THE WITNESS: Yes.

9 THE COURT: I'm sorry. I have become  
10 familiar with the exercise, Mr. Hansmann.

11 THE WITNESS: Yes. The contour will change  
12 depending upon the slope, or relief, in that area.

13 BY MS. DUNCAN:

14 Q. Now, are proper -- are individual properties  
15 or homes mapped on USGS maps?

16 A. No. That's not our job to map property.

17 Q. Okay. Are roads shown on these maps?

18 A. Yes, they are.

19 Q. Okay. Now, how could somebody, you know,  
20 look at one of these maps and determine the approximate  
21 location of a property?

22 A. So using the rosette that we've listed on  
23 here, it's mostly interstates, U.S. highways, state  
24 routes, as well as some local road names are printed on  
25 here as well.

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1                   So, following the -- the road network, a  
2   person could get pretty close to their property.

3           Q.    Okay. Does USGS map airports?

4           A.    Yes, we do.

5           Q.    Okay. Is there an airport located on the  
6   quadrangles sitting before you?

7           A.    Yes, there is.

8           Q.    Let's start on DX744 on the far left.

9                   Can you tell us where on this map is one  
10   located?

11          A.    So there's an airport located about the  
12   center of the map. And it's slightly to the right-hand  
13   side.

14                   MS. DUNCAN: Mr. Jackson, can you zoom in for  
15   us.

16   BY MS. DUNCAN:

17          Q.    And what's the name of that?

18          A.    That is Lakeside Airport.

19          Q.    Okay. Is -- is an airport included on the  
20   remainder of these quadrangles through time?

21          A.    Yes. It will be shown on every map.

22          Q.    Okay. Let's -- then let's turn to DX745, the  
23   next map from 1970 but photorevised 1980. Let me ask  
24   you some questions about this one.

25                   First, you mentioned that the airport is on

1 every one of these. Where is the airport on this map?

2 A. It's located about the center of the map and  
3 slightly to the right, just like the previous map.

4 Q. Okay. And what are the pink features on this  
5 map?

6 A. So those areas indicate areas that have  
7 changed since the map was produced the prior year  
8 before -- the prior time before.

9 Q. Okay. And if we look down to the bottom  
10 right corner, it states this map was photorevised 1980.  
11 What does that mean?

12 A. Yes. So in approximately -- somewhere around  
13 1980, it was determined that this area needed to be  
14 updated with new maps. So a new aerial photography was  
15 acquired. And they would inspect the aerial  
16 photography to determine the amount of change on each  
17 map.

18 If there was a lot of change, then a new map  
19 would be produced. If there wasn't that much change,  
20 then you would see something like this, with the purple  
21 areas showing what had changed from the time that the  
22 map had been produced before.

23 Q. Okay. If you look to the bottom left side of  
24 the map, there is some writing in pink. What's  
25 indicated in that note?

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1           A.     So that purple text is revisions shown in  
2     purple compiled from aerial photographs taken in 1977  
3     and other sorts of data. This information was not  
4     field-checked, and the map was edited in 1980. The  
5     purple tint indicates extension of urban areas.

6           Q.     Okay. Now, if we move through time to the  
7     next map in 1995 -- that's Defendants' Exhibit 741 --  
8     instead of pink features, there are red features.  
9     What's going on with this map?

10          A.     So as -- as previously, new aerial  
11     photography was acquired. And it was examined for the  
12     amount of change.

13                 This time, there was so much change that a  
14     complete update had to be done. Therefore, there is no  
15     purple shown because it's a brand-new map.

16                 And the pink areas indicate high-population  
17     or urban area, built-up areas.

18          Q.     And is -- is -- can you point out where the  
19     airport is on this map?

20          A.     Yes. It is in the -- about the same  
21     location -- well, it is the same location as previous  
22     maps.

23          Q.     Okay. And what's the name on this -- what's  
24     the name of the airport on this map?

25          A.     So it's the same airport, but the name has

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1 changed. It's Houston West airport.

2 Q. Okay. Now I'd like to move in time up to  
3 2016, DX747. Here, there are no red features. So what  
4 happened with this map?

5 A. So, in 2016 when we started making -- well,  
6 in 2010, we started making an electronic version.

7 The 2016 version, we do not have a national  
8 data set for built-up urban areas. So, therefore, we  
9 don't show that anymore. But what we do is include  
10 additional local road names to provide the user more  
11 information on the map.

12 Q. Now, taking a step back and looking at all  
13 four of these maps together, are Addicks and Barker  
14 dams depicted on these maps?

15 A. Yes, they are.

16 Q. For the record, why don't we use the far left  
17 map, DX744. Can you tell us where on the quad the  
18 Addicks and Barker dams are located?

19 A. So if we could zoom in about the center of  
20 the map to the right-hand corner -- bottom corner. I'm  
21 sorry.

22 You can see the Interstate 10 going through  
23 the center of the map there from east to west. On the  
24 north side of Interstate 10, the Addicks Dam is shown.  
25 And on the south side of Interstate 10, the Barker Dam

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1 is shown.

2 Q. Okay. Now, while we're zoomed in like this,  
3 what is the blue coloring shown behind the dam?

4 A. So the blue tint behind the dam indicates  
5 areas that are subject to inundation.

6 Q. Earlier, you mentioned that USGS uses blue to  
7 indicate water features. Is there a difference between  
8 areas subject to inundation and a water feature?

9 A. Yeah. So areas that have water year-round  
10 would be a solid blue pattern. And this is a blue  
11 dashed pattern that is not solid.

12 Q. Okay. And if we zoom in even more closely to  
13 the end of the dam where the areas of inundation begin,  
14 it appears there's a line with a number. What is that?

15 A. So, yes, that blue line is the extent of the  
16 area of inundation, with an elevation value printed on  
17 that line.

18 Q. Okay. Are there areas subject to inundation  
19 shown on all four of the maps before you?

20 A. Yes.

21 Q. Okay. If we go over to the 2016 map, DX747,  
22 it looks like -- the area behind the map -- or behind  
23 the dams looks a little different. Why is that?

24 A. So when we started creating the electronic  
25 version, we changed some of our symbology. The area is

1 still identified; it's just a slightly lighter blue.

2 It's not as prominent as the previous maps.

3 Q. Okay. If you look to the edge of the Addicks  
4 Dam like we did with DX744, but if you do that on  
5 DX747, is the same edge of the area depicted with a  
6 line and a number?

7 A. It is shown with a line, but it does not have  
8 a number on it.

9 Q. Okay. Why not?

10 A. Mainly because we don't show elevation for  
11 the extent of a area subject to inundation anymore  
12 because that area can change. And it really doesn't  
13 stand up.

14 Q. Okay. Taking a step back, now, you indicated  
15 that the blue areas with hashing on these maps are  
16 subject to inundation. So how would a reader looking  
17 at these maps be able to learn that?

18 A. So if we can go back to the first example,  
19 Exhibit 744.

20 Q. Okay.

21 A. And zoom into the bottom left-hand corner.  
22 So at the bottom of that note there, it says "areas  
23 covered by light blue pattern are subject to controlled  
24 inundation."

25 Q. Okay. Now, you directed us to the bottom



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1 left-hand corner. Would similar notes be found on maps  
2 from this time?

3 A. Yes. So any special notes pertaining to  
4 the -- to the map content would be listed in the bottom  
5 left-hand corner on all maps.

6 Q. Okay. And all maps continuing to today?

7 A. No. That is no longer in the credit note on  
8 the electronic version of the maps since 2010. We  
9 actually provide a symbology file with each quadrangle  
10 so that that is accompanied every time somebody  
11 downloads a new map.

12 Q. So, before 2010, the notes would in the  
13 bottom left corner?

14 A. Yes.

15 Q. And, after 2010, they'd be in a file?

16 A. Yes.

17 Q. Okay. Very quickly, let's turn to, then,  
18 DX745, which is photorevised in 1980.

19 And just show us again, where would a reader  
20 be able to determine what the blue hashing means?

21 A. So if we could zoom into that bottom  
22 left-hand corner again.

23 And at the very bottom, the areas covered by  
24 a light blue pattern are subject to controlled  
25 inundation.

1 Q. Let's move to the 1995 map, DX741.

2 How would a reader of this map know what the  
3 blue hashed areas are?

4 A. So, again, if they would zoom into the same  
5 area, areas covered by a dashed light blue pattern are  
6 subject to controlled inundation occurring as of 1970.

7 Q. Okay. Now I'd like to turn your attention to  
8 DX698. And we'll put that up on the screen for you,  
9 Mr. Hansmann.

10 Are you familiar with this document?

11 A. Yes. That is our current symbology file that  
12 we provide with every topographic map.

13 Q. So the 2016 map that we just looked at, how  
14 does the document we're looking at relate to the 2016  
15 map?

16 A. It would be included when it would be  
17 downloaded from the internet.

18 Q. And who produces this document?

19 A. The USGS.

20 MS. DUNCAN: Your Honor, the United States  
21 offers DX698 into evidence.

22 THE COURT: Mr. Vujasinovic?

23 MR. VUJASINOVIC: No objection.

24 THE COURT: Admitted.

25 (Whereupon, Defendants' Exhibit 698 was

1 admitted into evidence.)

2 BY MS. DUNCAN:

3 Q. Now, Mr. Hansmann, can you show us where in  
4 this document the symbol for subject to inundation  
5 appears?

6 A. Yes. So if we go to the last page in this  
7 document. And on the right-hand side at the top the  
8 item "submerged area and bogs," and then the symbology  
9 there at the bottom says "land subject to inundation."

10 Q. Now, taking a step back, have you reviewed  
11 anything that helps you understand why the USGS drew  
12 the inundation lines as it did behind Addicks and  
13 Barker dams?

14 A. Yes, I have.

15 MR. VUJASINOVIC: Objection. That's vague as  
16 to what time frame, please.

17 BY MS. DUNCAN:

18 Q. Mr. Hansmann --

19 THE COURT: Sustained.

20 BY MS. DUNCAN:

21 Q. Mr. Hansmann, is there a difference between  
22 the area depicted behind the dams that is subject to  
23 inundation for any of the four maps we were looking at?

24 A. No. There's nothing that's changed.

25 Q. So do you -- well, let me -- let me turn your

1 attention to DX42. And we'll put that up on the  
2 screen.

3 A. Yes.

4 Q. What is this document?

5 A. So these are project notes from the Addicks  
6 quadrangle.

7 Q. Okay. And why -- who keeps these notes?

8 A. So the -- these notes are created for every  
9 map that we create at USGS. There will be project  
10 notes along with field notes. And this page will be  
11 written out. It will have the name of the quad, which  
12 is at the top right-hand corner; the person that  
13 reviewed that quadrangle for accuracy; and a date of  
14 when that map was reviewed.

15 Q. Okay. Is there any -- can you tell us if  
16 there's anything on this document that relates to areas  
17 subject to inundation on the quads we looked at.

18 A. Yes. If we could move down in the document  
19 to where it states "Drainage."

20 Q. Okay. And, before you go any further, before  
21 we read from the document, I want to move this document  
22 into evidence, DX42.

23 MR. VUJASINOVIC: Is it more than just this  
24 one page? because I don't have a hard copy.

25 MS. DUNCAN: No.

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1 MR. VUJASINOVIC: All right. No objection.

2 THE COURT: Admitted.

3 (Whereupon, Defendants' Exhibit 42 was  
4 admitted into evidence.)

5 BY MS. DUNCAN:

6 Q. Now, Mr. Hansmann, you directed us to the  
7 drainage area.

8 A. Yes.

9 Q. Okay.

10 A. So under the drainage area, there is a  
11 note to areas subject to inundation. The area subject  
12 to inundation controlled by Addicks Dam is elevation of  
13 114. The area controlled by Barker Dam is 107.

14 Q. Okay. And how does this relate to the blue  
15 dashed areas shown on the four quads we looked at?

16 A. So that is how we determine where that line  
17 would be drawn, at the 114 elevation behind the dam and  
18 also the 107 elevation behind the dam.

19 Q. Okay. Now, taking a step back -- and we can  
20 set that document aside.

21 Are USGS topographic maps publicly available?

22 A. Yes, they are.

23 Q. And where are the maps available?

24 A. Currently, they're available online.

25 Q. Okay. Prior to 2010, were the maps publicly

1 available?

2 A. Yes, they were.

3 Q. And where were they publicly available?

4 A. You could obtain those at any USGS office,  
5 also universities, public libraries. You could also --  
6 any counties would have copies of those maps. And a  
7 person could acquire them from there.

8 Q. Okay. Now, are there other USGS topographic  
9 map quads that show the areas upstream of the  
10 reservoirs?

11 A. Yes, there is.

12 Q. Okay. I'd like to turn your attention to  
13 Defendants' Demonstrative 5. This is the second page  
14 in the stack that I've handed you. And this  
15 demonstrative depicts Defendants' Exhibit 756, 757,  
16 758, and 759.

17 Mr. Hansmann, are you familiar with these  
18 documents?

19 A. Yes, I am.

20 Q. And what are these documents?

21 A. This is four versions of the Hedwig Village  
22 quadrangle.

23 Q. Who created these maps?

24 A. The USGS.

25 Q. Okay. I'd like to quickly determine the date

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1 of each of these maps.

2 If we start with DX756, what's the date for  
3 this map?

4 A. So this is 1970.

5 Q. DX757?

6 A. This is 1982.

7 Q. DX758?

8 A. 1995.

9 Q. And DX759?

10 A. 2016.

11 MS. DUNCAN: Your Honor, I'd like to move  
12 these four exhibits into evidence.

13 MR. VUJASINOVIC: No objection.

14 THE COURT: What's the relevance?

15 MS. DUNCAN: The relevance goes to the  
16 character of the land at issue and the awareness or  
17 potential awareness of the areas subject to inundation,  
18 which also speaks to reasonable investment-backed  
19 expectations.

20 We've also had documents that have been  
21 entered into the record over the past several days that  
22 have referenced USGS quads.

23 THE COURT: This covers Hedwig Village.

24 MS. DUNCAN: So, Your Honor --

25 THE COURT: I take it it's the quadrangle

1 just to the east of the Addicks quadrangle; is that  
2 correct?

3 MS. DUNCAN: If you look at the top left  
4 corner, you've got the east side of Addicks, including  
5 the area north --

6 THE COURT: I know, but there's a box that  
7 tells you where this quadrangle fits in the scheme of  
8 things.

9 MS. DUNCAN: Yes.

10 THE COURT: All right.

11 MS. DUNCAN: And in a moment we'll also offer  
12 some exhibits that are indeed joint exhibits between  
13 both of the parties that are these USGS maps with the  
14 test properties overlaid upon them. So we're simply  
15 offering the --

16 THE COURT: DX756, 757, 758, and 759 are  
17 admitted.

18 (Whereupon, Defendants' Exhibits 756,  
19 757, 758 and 759 were admitted into  
20 evidence.)

21 BY MS. DUNCAN:

22 Q. Mr. Hansmann, for the record, are Addicks --  
23 is Addicks Dam depicted on these maps?

24 A. Yes, it is.

25 Q. And where?



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1 A. So it's pretty much the left side of the map.

2 Q. Okay. Are there any areas subject to  
3 inundation depicted on these four maps?

4 A. Yes, it is.

5 Q. Okay. And where?

6 A. It's behind the dam.

7 Q. I'd like to now turn your attention to  
8 demonstrative -- Defendants' Demonstrative 3 -- excuse  
9 me -- Defendants' Demonstrative 6.

10 And this features Defendants' Exhibits 752,  
11 753, 749, and 754.

12 Mr. Hansmann, are you familiar with these  
13 exhibits?

14 A. Yes, I am.

15 Q. And what are these exhibits?

16 A. So this is four versions of the Clodine,  
17 Texas, quadrangle.

18 Q. And using the legend at the bottom right side  
19 of the quad, can you tell -- can you tell the Court  
20 where this quad fits in relation to the Addicks quad,  
21 the first quad we discussed?

22 A. So, this one, it is due south of the Addicks,  
23 Texas, one.

24 Q. And who produced these four maps?

25 A. It's USGS.

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1 Q. Okay. And let's quickly go through the dates  
2 of each of these maps.

3 What is the date of DX752?

4 A. This is 1970.

5 Q. DX753?

6 A. It's 1982.

7 Q. DX749?

8 A. 1995.

9 Q. And DX754?

10 A. That's 2016.

11 MS. DUNCAN: Your Honor, the United States  
12 offers Defendants' Exhibit 752, 753, 749, and 754 into  
13 evidence.

14 MR. VUJASINOVIC: No objection.

15 THE COURT: Admitted.

16 (Whereupon, Defendants' Exhibits 752,  
17 753, 749 and 754 were admitted into  
18 evidence.)

19 BY MS. DUNCAN:

20 Q. Mr. Hansmann, is the Barker Dam depicted on  
21 these maps?

22 A. Yes, it is.

23 THE COURT: You're going to have to wait just  
24 a moment --

25 MS. DUNCAN: Of course.

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1 THE COURT: -- for the Court to catch up with  
2 its notes.

3 You may proceed.

4 BY MS. DUNCAN:

5 Q. Mr. Hansmann, now, for the record, can you  
6 describe for us where on these quads the Barker Dam is  
7 depicted.

8 A. So it's pretty much the top half of the  
9 quadrangle.

10 Q. Okay. And are there any areas subject to  
11 inundation depicted on this map?

12 A. Yes, there is.

13 Q. Where?

14 A. It's behind the dam.

15 Q. Mr. Hansmann, was your office asked to create  
16 some maps for this case?

17 A. Yes, we were.

18 Q. Okay. What was your office asked to do?

19 A. So the Department of Justice contacted us and  
20 asked us to take a file that they had collected of  
21 property outlines for this area and overlay them on top  
22 of our U.S. topographic maps.

23 MR. VUJASINOVIC: I'm sorry, Judge. I missed  
24 that question.

25 MS. DUNCAN: I'd be happy to ask again.

1 MR. VUJASINOVIC: Thanks.

2 THE COURT: We can have it read back, but go  
3 ahead, Ms. Duncan.

4 BY MS. DUNCAN:

5 Q. What were you asked to do?

6 A. So we were asked to overlay the properties  
7 that the Department of Justice had collected on top of  
8 our U.S. topographic maps.

9 Q. Okay. And so how were these maps created?

10 A. So using GIS software, we brought in our maps  
11 and then overlaid the properties that the Department of  
12 Justice provided to us on top of those.

13 Q. Okay. I'd now like to turn your attention to  
14 Defendants' Demonstrative 7, and this includes four  
15 exhibits.

16 MS. DUNCAN: And, Your Honor, on the  
17 demonstrative, we have DX numbers. But I will read for  
18 you the JX numbers, because all of the remainder of the  
19 exhibits I will be offering are joint exhibits. So  
20 starting from left to right, we have JX266, JX267,  
21 JX268, and JX269.

22 BY MS. DUNCAN:

23 Q. Mr. Hansmann, are you familiar with the four  
24 maps before you?

25 A. Yes, I am.

1 Q. And what are these maps?

2 A. This is the four versions of the Addicks,  
3 Texas, quad with the property value -- or property  
4 outlines on top of them.

5 Q. Okay. And -- and can you tell us, how are  
6 the properties depicted on this map -- on these maps?

7 A. They're shown with a yellow fill with a red  
8 outline, and the text is a red and yellow as well.

9 Q. Is there a legend on this map for the  
10 parcels?

11 A. Yes, there is.

12 Q. Okay. Can you describe that for us.

13 A. So that is in the top right-hand corner.

14 Q. Okay. And what is -- what's the language in  
15 that legend?

16 A. It says "parcels," and then it has the symbol  
17 that is used and it says "upstream."

18 Q. Okay. Now, opposite of that legend is a box  
19 with text.

20 What's -- what's that information?

21 A. So this is a statement that these maps were  
22 produced on the request of the Department of Justice  
23 with those properties.

24 Q. Okay. Now, is this how the test properties  
25 are depicted on the USGS maps for all the maps that

1 your office created?

2 A. Yes.

3 MS. DUNCAN: Your Honor, the United States  
4 offers JX266, 267, 268, and 269 into evidence.

5 MR. VUJASINOVIC: Your Honor, we'd object  
6 because these are annotated and the originals would be  
7 the best available evidence.

8 THE COURT: Is that -- they are annotated.  
9 But, on the other hand, we have a foundation for -- a  
10 basis for the annotations.

11 MS. DUNCAN: Yes. Yes, we do. Mr. Hansmann  
12 explained that his office took the parcels, and he  
13 explained how the parcels were overlaid onto these  
14 maps.

15 Moreover, the underlying maps are already in  
16 evidence, and Mr. Hansmann explained what was added to  
17 these maps. This is proper for a trial presentation.

18 THE COURT: Mr. Vujasinovic.

19 MR. VUJASINOVIC: Well, I would maintain the  
20 objection that the originals are the best available  
21 evidence. The versions they're seeking to admit were  
22 never publicly available.

23 MS. DUNCAN: May --

24 THE COURT: Overruled. They're admitted.  
25 JX266, 67, 68, and 69 are admitted.

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1 (Whereupon, Joint Exhibits 266, 267, 268,  
2 and 269 were admitted into evidence.)

3 BY MS. DUNCAN:

4 Q. Mr. Hansmann, for the four maps before you,  
5 just for the record, what are the test properties that  
6 are depicted on this map? And let me just note that  
7 there is a property noted as Mitchell Cummings. Don't  
8 identify that one. He has been dismissed from this  
9 case.

10 So other than the Mitchell Cummings property,  
11 what are the properties depicted on these maps?

12 A. If we could zoom in to the top right hand,  
13 and we'll work our way down.

14 This is the Burnham at the very top, then  
15 Stewart, Sidhu, Turney, West Houston Airport Corp, and  
16 Holland. And then if we could zoom in at the bottom  
17 blue-tint area, there's one more, the Popovici.

18 Q. Thank you.

19 Mr. Hansmann, let's now look to Defendants'  
20 Demonstrative 8.

21 MS. DUNCAN: And, Your Honor, this  
22 demonstrative features the DX numbers, but I'm going to  
23 read to you the JX numbers moving from the left to  
24 right. And those are JX276, 277 --

25 THE COURT: Just a moment.

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1 MS. DUNCAN: Yes.

2 THE COURT: 276.

3 MS. DUNCAN: Yes, sir.

4 THE COURT: Just a moment. Yes.

5 MS. DUNCAN: So 276, 277, 278, and 279.

6 BY MS. DUNCAN:

7 Q. Mr. Hansmann, are you familiar with these  
8 exhibits?

9 A. Yes, I am.

10 Q. And what are these exhibits?

11 A. This is the Hedwig Village quadrangle with  
12 the property parcels laid on top of them.

13 MS. DUNCAN: Your Honor, the United States  
14 offers JX276, 277, 278, and 279 into evidence.

15 MR. VUJASINOVIC: No objection, Judge.

16 THE COURT: Admitted.

17 (Whereupon, Joint Exhibits 276, 277,  
18 278, and 279 were admitted into  
19 evidence.)

20 BY MS. DUNCAN:

21 Q. Mr. Hansmann, I would like for you to read --

22 THE COURT: Ms. Duncan, just give me a  
23 moment, Ms. Duncan.

24 MS. DUNCAN: Yes.

25 THE COURT: I'm amazed the reporter is doing



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1 such a good job in keeping up with you.

2 THE COURT REPORTER: Thank you.

3 THE COURT: Yes. Go ahead.

4 BY MS. DUNCAN:

5 Q. Mr. Hansmann, for the record, I'd like you to  
6 tell us what test properties are located on each of  
7 these maps. And why don't we use the far left map  
8 shown up here, DX775, which is also JX276, as an  
9 example.

10 Mr. Jackson, can you zoom in so that  
11 Mr. Hansmann can read these properties.

12 A. So there are two properties, Lakes on  
13 Eldridge and Wind.

14 Q. Now, Mr. Hansmann, let's move on to  
15 Defendants' Demonstrative 9.

16 MS. DUNCAN: Again, Your Honor, this  
17 demonstrative features DX numbers. I will read in the  
18 JX numbers. Starting from the left to the right, those  
19 are JX271, 272, 273, and 274.

20 BY MS. DUNCAN:

21 Q. Mr. Hansmann, are you familiar with these  
22 exhibits?

23 A. Yes, I am.

24 Q. What are these?

25 A. This is the Clodine, Texas, quadrangle with

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1 the test properties on top of them.

2 MS. DUNCAN: Okay. Your Honor, the United  
3 States offers Joint Exhibits 271 through 274 into  
4 evidence.

5 MR. VUJASINOVIC: No objection.

6 THE COURT: Admitted.

7 (Whereupon, Joint Exhibits 271 - 274  
8 were admitted into evidence.)

9 THE COURT: But give me a moment.

10 Thank you.

11 BY MS. DUNCAN:

12 Q. Mr. Hansmann, I'd like you to tell us for the  
13 record which test properties are located on these maps.  
14 Why don't we use the far left map, which is DX770, but  
15 also JX271.

16 If we can zoom in, Mr. Jackson.

17 Can you tell us for the record what  
18 properties are on these maps.

19 A. So the Soares, Banker, and Micu.

20 Q. And now I'd like to turn to the last, Defense  
21 Demonstrative 10. This features three maps with  
22 DX numbers.

23 MS. DUNCAN: Your Honor, I will also read in  
24 the JX numbers for you. Starting from the left to the  
25 right, those are JX271, 272, 273, and 274.

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1 Oh, excuse me. I have just read in the wrong  
2 numbers.

3 Thank you, Charles.

4 Judge, the maps shown on here are DX779, 780,  
5 and 781, and those are actually JX280, 281, and 282.

6 THE COURT: Let's start again with the  
7 JX numbers.

8 MS. DUNCAN: Yes, sir. JX280, 281, and 282.

9 THE COURT: Thank you.

10 BY MS. DUNCAN:

11 Q. Mr. Hansmann, are you familiar with these  
12 exhibits?

13 A. Yes, I am.

14 Q. And what are they?

15 A. This is three different versions of the  
16 Richmond northeast quadrangle.

17 Q. And who created these maps?

18 A. USGS created the original base maps, yes.

19 Q. Okay. And you said original base maps. And  
20 so what do you mean by that?

21 A. So these versions here have the property  
22 parcels laid on top of the original --

23 Q. Okay.

24 A. -- USGS quadrangle.

25 Q. So did USGS create both the base maps and the

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1 portion with the overlays?

2 A. Yes, we did.

3 Q. Okay. Now, have we discussed this underlying  
4 base map yet?

5 A. No, we have not.

6 Q. So I'm going to ask you a few more questions  
7 about it just so that our record is clear.

8 You mentioned this is the Richmond  
9 quadrant -- or quadrangle. So let's talk about the  
10 dates of those.

11 A. Okay.

12 Q. Let's go to the left, the Exhibit DX779,  
13 which is also JX280.

14 What's the date of this map?

15 A. So this is 1971.

16 Q. Okay. And if we move to the next map, which  
17 is DX780 and also JX281.

18 What's the date of this map?

19 A. This is 1971 but revised in 1980.

20 Q. If we move to the last map on the far right,  
21 which is DX781 and also JX282.

22 What's the date of this map?

23 A. This is 2016.

24 Q. Okay. And, now, can you remind us, what are  
25 the items that USGS overlaid onto this map at the

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1 request of --

2 A. So the items that we placed on top of these  
3 maps were the property parcels that were provided to us  
4 by Department of Justice.

5 Q. Okay. And how about the legend for the  
6 parcels?

7 A. So it's located at the bottom of the -- the  
8 map there.

9 Q. Did you add that too?

10 A. Yes. We added that along with the disclaimer  
11 on the other side.

12 Q. Okay. And so, but for the addition of the  
13 property parcels, the legend, and the disclaimer, do  
14 these three maps reflect the USGS topographic maps that  
15 your office typically maintains?

16 A. Yes.

17 MS. DUNCAN: Your Honor, the United States  
18 offers JX282, 281, and 280 into evidence.

19 MR. VUJASINOVIC: No objection.

20 THE COURT: Admitted.

21 (Whereupon, Joint Exhibits 281, 282, 280  
22 were admitted into evidence.)

23 BY MS. DUNCAN:

24 Q. Mr. Hansmann, for the record, which  
25 properties are depicted on these maps? And if it -- if

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1 it will help, let's zoom in to the far left map.

2 A. And let's zoom in to the top left corner.

3 Q. Top right?

4 A. Or top right corner. Excuse me. And this is  
5 the Giron property.

6 Q. Okay. And if we -- if we zoom out again,  
7 just for the record, are -- is the Barker Dam depicted  
8 on this map?

9 A. Yes, it is.

10 Q. Okay. And are there any areas subject to  
11 inundation depicted on this map?

12 A. Yes.

13 Q. Where are they?

14 A. Behind the dam.

15 Q. Say that again.

16 A. Behind the dam.

17 Q. Okay. Now, we've looked at several series of  
18 maps that have a 1995 version of a map.

19 A. Yes.

20 Q. There's not a 1995 version before us.

21 Why is that?

22 A. No. So in 1995, when we were going through  
23 and updating these maps, it was determined that there  
24 wasn't anything on this map that had changed;  
25 therefore, a new map was not needed.

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1 MS. DUNCAN: May I have one moment?

2 THE COURT: Yes.

3 MS. DUNCAN: No further questions.

4 THE COURT: Thank you.

5 Mr. Vujasinovic, cross-examination.

6 MR. VUJASINOVIC: Yes, sir.

7 CROSS-EXAMINATION

8 BY MR. VUJASINOVIC:

9 Q. Sir, my name is Vuk Vujasinovic. I'm with VB  
10 Attorneys. We've never met before.

11 A. No.

12 Q. You didn't give a deposition in this case;  
13 correct?

14 A. No, I did not.

15 Q. And have you ever been to Houston before now?

16 A. No, I have not.

17 Q. Okay. First time in Houston?

18 A. Yes.

19 Q. All right. And these -- the USGS maps you've  
20 been talking about, the -- the "subject to controlled  
21 inundation" language?

22 A. Yes, sir.

23 Q. You said that the only maps that are  
24 available online were 2010 or later; is that correct?

25 A. Yes, sir.

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1 Q. And so the only maps that are in evidence  
2 that are after that date are the handful of 2016 maps;  
3 is that correct?

4 A. No, sir. These quads have been updated every  
5 three years since 2010.

6 Q. Okay.

7 A. So that would mean there would be three or  
8 four versions of that map.

9 Q. Okay. Now, what is the blue -- the blue  
10 shading that you've discussed in some of these maps,  
11 what is -- what is that based on?

12 A. I don't understand the question.

13 Q. Is it based on elevations? Is it based on  
14 storm design? maximum impoundment? Where did USGS get  
15 the data to draw the blue?

16 A. So that is based off the elevation, and that  
17 came from our field notes that were taken in 1970,  
18 which was in the map materials box in Denver for this  
19 quadrangle. And, in there, it was determined that the  
20 lowest elevation on the dam was used for determining  
21 the area of inundation.

22 Q. Okay. None of the maps say by whom anyone  
23 could be inundated; is that correct?

24 A. No, it does not.

25 Q. And none of -- none of the maps say that



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1 anybody's home or any geographical area is located in  
2 within the government's reservoir, do they?

3 A. No, it does not.

4 Q. And none of the maps say that any land or  
5 properties or homes are subject to or at risk of being  
6 inundated by the government, do they?

7 A. No, it does not.

8 Q. None of the -- none of the maps you've  
9 discussed tie that blue-shaded area in any way to the  
10 actual Addicks and Barker dams, do they?

11 A. Could you repeat that.

12 Q. There's no explanation in there tying the  
13 blue-shaded area to anything concerning the Addicks and  
14 Barker dams, is there?

15 A. On the map?

16 Q. Yeah.

17 A. No.

18 Q. Okay. Now, I'm going to show you what's been  
19 admitted as Exhibit 2284 in this case. It's a -- it's  
20 a memo from 1989, and someone called in for some  
21 information. It was a potential home buyer, and then  
22 the Corps folks contacted Mr. Richard Long.

23 Do you know who that is?

24 A. No, sir, I do not.

25 Q. All right. And, apparently, Mr. Long was the

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1 source of some of the information generated in this  
2 exhibit. So I'm going to direct you to page 2 of the  
3 exhibit where Mr. Long -- he referenced --

4 Can you read that highlighted right there?

5 A. "USGS quad maps showing areas of controlled  
6 inundation are somewhat misleading."

7 Q. Okay. So I have been sitting here listening  
8 to you this morning and so was everyone else in the  
9 courtroom.

10 Would you agree that those maps are somewhat  
11 misleading?

12 A. No, I would not.

13 Q. No. So you've been -- but you have been  
14 involved with these maps detailed for, like, over 30  
15 years; right?

16 A. Yes.

17 Q. Okay. You think they might be somewhat  
18 misleading to the average person that may be buying a  
19 home here in Houston?

20 A. I don't know.

21 Q. More likely that they probably are misleading  
22 to your typical home buyer.

23 Would you admit that, sir?

24 A. No, I would not.

25 Q. Now, are you here saying that these USGS maps

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1 disclose to potential home buyers that they're inside a  
2 reservoir?

3 A. Could you repeat that, please.

4 Q. Are you telling the Court that these maps  
5 of -- of USGS somehow disclose to a homeowner the house  
6 they're about to buy is located inside a reservoir?

7 A. We don't show property on our maps. So  
8 that -- that would be up to the homeowner to make that  
9 determination, not USGS.

10 Q. So the homeowner would have to start putting  
11 together the -- the dots and the pieces of the puzzle  
12 you've walked us through here this morning; correct?

13 A. Yes, they would.

14 Q. Okay. And, honestly, do you think the USGS  
15 maps alone are an effective way to tell folks that  
16 their house they're going to buy is located in a  
17 government reservoir?

18 A. No, I don't know.

19 Q. You don't know?

20 A. No.

21 Q. You're not here to tell the Court it is, are  
22 you?

23 A. I'm not here to give my opinion, no.

24 Q. The USGS -- the maps you've been talking  
25 about, as far as you know, they're not a required

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1 disclosure or document in a Texas real estate

2 transaction, are they?

3 A. I wouldn't know.

4 Q. Now, are you familiar with the flood

5 insurance rate maps?

6 A. I'm familiar, yes.

7 Q. Okay. And so what do you think a typical  
8 homeowner's going to look at to determine the flood or  
9 possible flood situation of a house they're going to  
10 buy, looking at a FEMA flood insurance rate map or  
11 going through this process about the USGS maps you've  
12 explained this morning?

13 MS. DUNCAN: Objection. Calls for  
14 speculation.

15 THE COURT: I'm sorry. The objection is  
16 based on what?

17 MS. DUNCAN: Objection. Calls for  
18 speculation.

19 THE COURT: Overruled.

20 THE WITNESS: I wouldn't know.

21 BY MR. VUJASINOVIC:

22 Q. When's the last time you bought a house?

23 A. 2010.

24 Q. Did you look at the flood insurance rate map?

25 A. No, I did not.

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1 Q. Now, you've discussed where some of the  
2 test -- I guess all the test properties are located  
3 within the USGS maps.

4 Have you looked at where those properties are  
5 located on the flood insurance maps?

6 A. No, I haven't.

7 Q. I'm going to -- I just want to give you a  
8 couple of examples. So this is already admitted as  
9 Plaintiffs' Exhibit 461.

10 And do you generally recognize that as a  
11 flood insurance map?

12 A. Yes.

13 Q. Okay. I mean, your 30-year history of map  
14 knowledge -- I mean, I'll represent to you, first of  
15 all, that the -- one of the test properties, the  
16 airport, is located in this bottom left-hand corner of  
17 this flood insurance map.

18 You follow me?

19 A. Yes, sir.

20 Q. Okay. Now, does anything on this map tell  
21 anyone buying a house or a business or a property that  
22 there -- that it is located in an area that's at risk  
23 of getting flooded by a government project?

24 A. Not that I can tell.

25 Q. Let me show you just one other example. This

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1 is already admitted as -- as Plaintiffs' Exhibit 454.

2 It's kind of near the top of Addicks. And this is part  
3 of the Bear Creek area. We got Mr. Burnham in there  
4 and several others.

5 Same question. Anything on this flood  
6 insurance map tell a prospective buyer that they're  
7 about to buy a home that's at risk of being inundated  
8 by the government's project?

9 A. No.

10 Q. You told the Court about the -- after 2010,  
11 folks could download an electronic version of the maps;  
12 right?

13 A. Yes.

14 Q. What website -- where do they go to do that?

15 A. USGS website.

16 Q. All right. And then what kind of computer is  
17 required to do that?

18 A. Any computer with access to the internet can  
19 access those.

20 Q. Can you do that off your telephone, cell  
21 phone? Is that going to work?

22 A. No, that's a mobile application; it's not a  
23 computer.

24 Q. Okay. So a cell phone won't work?

25 A. No.

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1 Q. iPads?

2 A. An iPad would.

3 Q. An iPad, it's a mobile device. That works?

4 A. You can connect to the internet with an  
5 iPad.

6 Q. Okay. You were talking about Exhibit 744 and  
7 this language of "subject to inundation" at the bottom  
8 left-hand corner. Do you remember that?

9 A. Yes.

10 Q. Okay. And so it says the -- basically, the  
11 blue shaded area is supposed to -- that language  
12 applies to the blue shaded area; correct?

13 A. Yes.

14 Q. But then apparently in 2016 -- oops.  
15 Sorry -- y'all have completely changed the color  
16 pattern of these maps; right?

17 A. Yes. We changed the color.

18 Q. So, as of 2016, on the new maps, all the test  
19 properties are high and dry; right?

20 A. I believe, if you zoom in, that same pattern  
21 is still there; it's just a lighter shade of blue.

22 Q. Okay.

23 Let's zoom in.

24 Okay. Holland, it looks dry to me. I mean,  
25 where's the blue? I don't see anything on there.

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1 A. I can see it.

2 Q. They look different than the prior maps;  
3 right?

4 A. Yes. It's a lighter shade of blue.

5 Q. The exhibit -- Defendants' Exhibit 698, which  
6 is the symbols document. You remember that one?

7 A. Yes, sir.

8 Q. And it's got the -- that land subject to  
9 inundation language in there?

10 A. Yes.

11 Q. And it says "areas shaded in blue are" --  
12 that language applies to those; is that right?

13 A. Yes.

14 Q. But where is the blue in the 2016 maps?

15 A. Well, on this version, it is hard to see, but  
16 it is there. I can see it in the green. I can see the  
17 outline on the map.

18 Q. Okay. Now, the -- Defendants' Exhibit 42,  
19 the -- the handwritten project notes, you remember that  
20 one?

21 A. Yes.

22 Q. That's never been available to the public;  
23 correct?

24 A. No. Those notes are not available to the  
25 public.



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1 Q. Thanks for your time, sir.

2 MR. VUJASINOVIC: I'll pass the witness.

3 THE COURT: Thank you, Mr. Vujasinovic.

4 The Court has a couple of questions. May I  
5 ask them?

6 MS. DUNCAN: Yes, Your Honor.

7 THE COURT: I waited until after the direct  
8 and cross because they might have a substantive import.

9 Mr. Hansmann, we've had -- have you been in  
10 the courtroom during the testimony of others in this  
11 case?

12 THE WITNESS: No, sir, I have not.

13 THE COURT: Let me just represent to you that  
14 we've had testimony about subsidence of land in the  
15 Houston area.

16 THE WITNESS: Yes.

17 THE COURT: To what extent does the USGS,  
18 when it's updating its quadrangle maps, take into  
19 account subsidence.

20 THE WITNESS: So I'm not so sure that we use  
21 subsidence, but we do use the vertical datum that has  
22 been updated, I think, three times now. So that is an  
23 adjustment to the land elevations for the whole map.  
24 So that's how that's accounted for.

25 THE COURT: What was the last time that

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1 adjustment was made?

2 THE WITNESS: 1988.

3 THE COURT: So if there's been subsidence  
4 since 1988, that wouldn't be reflected on the  
5 quadrangle maps?

6 THE WITNESS: Correct.

7 THE COURT: The Court has no further  
8 questions.

9 Ms. Duncan?

10 MS. DUNCAN: I just have a few. I have a few  
11 questions.

12 REDIRECT EXAMINATION

13 BY MS. DUNCAN:

14 Q. Mr. Hansmann, you said that you bought a home  
15 in 2010; is that right?

16 A. Yes, I did.

17 Q. Where do you live?

18 A. I live in Missouri -- Dixie, Missouri, which  
19 is about 30 miles from Rolla, where I work.

20 MS. DUNCAN: No further questions.

21 THE COURT: Mr. Vujasinovic?

22 MR. VUJASINOVIC: Nothing further, Judge.

23 THE COURT: May the Court excuse  
24 Mr. Hansmann?

25 MR. VUJASINOVIC: Yes.

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1 THE COURT: Thank you, Mr. Hansmann. You are  
2 an expert in your subject. Thank you indeed for coming  
3 and testifying.

4 MS. DUNCAN: Your Honor, the United States  
5 calls Dr. Elizabeth Asche.

6 THE COURT: Asche?

7 MS. DUNCAN: Yes, sir, A-s-c-h-e.

8 MR. SHAPIRO: May I replace this?  
9 I'm going to just replace this, if that's  
10 okay.

11 THE COURT: Dr. Asche, would you come forward  
12 and be sworn as a witness, please.

13 Dr. Asche, will you stop about there and  
14 raise your right hand to be sworn.  
15 Thereupon--

16 ELIZABETH ASCHE, PHD,  
17 was called as a witness, and having been first duly  
18 sworn, was examined and testified as follows:

19 THE WITNESS: I do.

20 THE COURT: Please be seated in the witness  
21 stand. Thank you. Make yourself comfortable, if  
22 possible -- or as comfortable as possible.

23 THE WITNESS: Thank you, sir.

24 THE COURT: And state your full name for the  
25 record.

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1 THE WITNESS: Dr. Elizabeth Ann Asche.

2 MS. DUNCAN: May I proceed?

3 THE COURT: Yes.

4 DIRECT EXAMINATION

5 BY MS. DUNCAN:

6 Q. Dr. Asche, where do you work?

7 A. I work at the Federal Emergency Management  
8 Agency.

9 Q. And how long have you been at FEMA?

10 A. Since 2015.

11 Q. What do you do for FEMA?

12 A. I am the chief of the insurance analytics and  
13 policy branch within the federal insurance directorate.

14 Q. Okay. And, as the branch chief, what are  
15 your primary job responsibilities?

16 A. Essentially, I oversee two different teams:  
17 a policy team that has the responsibility to update  
18 our standard guidance documents, develop standard  
19 operating procedures, and work on congressional reports  
20 and other policy products; and an analytics team, which  
21 has the primary responsibility, as the data stewards of  
22 the National Flood Insurance Program data, to develop  
23 products and analyses from that data.

24 Q. Okay. You mentioned the National Flood  
25 Insurance Program. I'm going to ask you some questions

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1 about that in a moment, but is that program also known  
2 as the NFIP?

3 A. Yes.

4 Q. And does FEMA maintain information about  
5 policies held under the NFIP?

6 A. Yes.

7 Q. And does FEMA maintain information about  
8 claims made under the NFIP?

9 A. Yes.

10 Q. Okay. How long have you served as branch  
11 chief?

12 A. Since 2016.

13 Q. Okay. How long has that branch been in  
14 place?

15 A. Since 2016. I had the opportunity to build  
16 the branch from the ground up.

17 Q. Okay. And you mentioned that you've been at  
18 FEMA since 2015. What did you do before beginning this  
19 branch?

20 A. I was hired as an expert to do NFIP reform.

21 Q. Okay. And what sort of work experience do  
22 you have before FEMA?

23 A. I worked for -- for ten years full-time and  
24 part-time at a think tank for a federally funded  
25 research and development center for the Department of

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1 Homeland Security.

2 Q. Can you give us an example of some of the  
3 work that you did at that think tank?

4 A. Yeah. One of the projects that I worked on,  
5 I authored a report on the kind of history of federal  
6 disaster assistance called "Financing Recovery from  
7 Catastrophic Events."

8 Q. Okay. And, Dr. Asche, what is your  
9 educational background?

10 A. I have a bachelor's in environmental  
11 engineering from the Massachusetts Institute of  
12 Technology. I have a master's in economics and a PhD  
13 in economics from the University of California Santa  
14 Barbara.

15 Q. And what did your doctoral research focus on?

16 A. The economics of the National Flood Insurance  
17 Program.

18 Q. So are you familiar with the history of the  
19 National Flood Insurance Program?

20 A. I am.

21 Q. Okay. Now, from a high-level perspective,  
22 what is the NFIP?

23 A. The NFIP is a flood insurance program that is  
24 backed by the federal government.

25 Q. When was it created?

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1           A.     The program was created in 1968.

2           Q.     Okay. And what was going on historically at  
3 the time the NFIP was created?

4           A.     In approximately the 30 years prior to the  
5 NFIP's creation, there was series of very large floods,  
6 where the federal government paid a lot of money to  
7 help communities and individuals recover from these  
8 flood events. In addition, insurance was not available  
9 at economically feasible rates.

10          Q.     Okay. And so why was the NFIP created?

11          A.     The NFIP was created to reduce the risks and  
12 costs associated with flooding that were borne by  
13 taxpayers -- individuals -- and communities. It was  
14 built to do so by initially offering subsidized flood  
15 insurance to people and businesses living in  
16 communities that participate in the NFIP.

17                 Communities that participate in the NFIP need  
18 to adopt and enforce minimum floodplain management  
19 ordinances, which are developed and intended to reduce  
20 those risks and costs of flooding.

21          Q.     Okay. And what are the mechanics of how a  
22 claim on an NFIP insurance policy is paid?

23          A.     Essentially, a policyholder will file a claim  
24 on a flood insurance policy. And this may be with a  
25 private insurance company that writes on behalf of the

1 NFIP.

2 The NFIP, the federal government, has a fund  
3 called the National Flood Insurance Fund, where they  
4 collect and deposit premiums and fees. They come in  
5 from policyholders. And that fund is used to pay  
6 claims.

7 If that fund is exhausted in catastrophic  
8 events, the NFIP has the authority to borrow money from  
9 the Treasury to pay additional claims.

10 Q. Okay. In your job, do you keep track of how  
11 many flood insurance policies are sold?

12 A. Yes.

13 Q. Why do you track that?

14 A. One of the reasons that we track how many  
15 flood insurance policies are sold and purchased is that  
16 a big goal of FEMA, Goal 1 in our strategic plan, is to  
17 build a culture of preparedness in the United States.  
18 And we recognize that insurance is one of the best  
19 lines of defense that an individual can have for their  
20 own preparedness.

21 We also recognize that there's an insurance  
22 gap. There aren't as many people that have insurance  
23 as we would like to have insurance. So we want to  
24 measure our progress towards closing that insurance gap  
25 in order to meet our strategic goals.



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1 Q. Is there a term for the measurement of the  
2 number of people that hold flood insurance policies?

3 A. Yes. We have developed a measurement of  
4 the -- the proportion of people that hold flood  
5 insurance policies. We call that the flood insurance  
6 market penetration rate. We specifically study the  
7 residential flood insurance market penetration rate.

8 Q. How do you calculate the residential market  
9 penetration rate?

10 A. So the market penetration rate is the number  
11 of households or residences that have flood insurance  
12 in a specific geographic area divided by the number of  
13 households in that geographic area.

14 For example, if you had a county where there  
15 were ten households and five of those households had  
16 flood insurance, your residential market penetration  
17 rate would be 50 percent.

18 Q. Okay. Now, you used the example of a county.  
19 So does FEMA -- does your branch ever determine the  
20 penetration rates as to certain geographic areas?

21 A. Yes.

22 Q. So are you familiar with the penetration --  
23 market -- residential market penetration rates for the  
24 nation?

25 A. I am.

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1 Q. And are you familiar with the residential  
2 market penetration rates for Harris County?

3 A. I am.

4 Q. And are you familiar with the residential  
5 market penetration rates for Fort Bend County?

6 A. I am.

7 Q. Are you familiar with those rates as of the  
8 time just before Hurricane Harvey?

9 A. I am.

10 Q. Okay.

11 MS. DUNCAN: Your Honor, I'd like to ask  
12 Dr. Asche to provide us those three numbers. I think  
13 it would be helpful if she could use the flip chart to  
14 write those down. Would you allow her to do so?

15 THE COURT: She may. On the other hand, we  
16 can actually take notes as we go. But the use of a  
17 flip chart is allowed.

18 THE WITNESS: All right.

19 THE COURT: We can hear anyway; barely, but  
20 we can hear.

21 Go ahead, Doctor.

22 BY MS. DUNCAN:

23 Q. You'll need to speak up so that the court  
24 reporter can hear you. And, after you write, be sure  
25 to speak in the court reporter's direction.

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1 MS. DUNCAN: Your Honor, may I approach with  
2 the marker?

3 THE COURT: Yes.

4 BY MS. DUNCAN:

5 Q. Dr. Asche, what is the residential market  
6 penetration rate for the nation as a whole?

7 A. The residential market penetration rate for  
8 the nation as a whole right before Hurricane Harvey was  
9 approximately 3 percent.

10 Q. And what is the residential market  
11 penetration -- or what was the residential market  
12 penetration rate for Harris County as a whole just  
13 before Hurricane Harvey?

14 A. The residential market penetration rate for  
15 Harris County just before Hurricane Harvey was  
16 approximately 21 percent.

17 Q. And, Dr. Asche, what was the residential  
18 market penetration rate for Fort Bend County as a whole  
19 just before Hurricane Harvey?

20 A. The residential market penetration rate for  
21 Fort Bend County just before Hurricane Harvey was  
22 approximately 19 percent.

23 Q. And can you provide us a title for this  
24 chart?

25 A. Yes. I am entitling the chart "Estimated

1 Residential Market Penetration Rate." And I'm going to  
2 put a date on it too.

3 "Estimated NFIP Market Penetration and  
4 Residential." So the date this is as of is  
5 August 31st, 2017.

6 And you'll note that that date is the end of  
7 August. And it's a little bit after Hurricane Harvey  
8 started. However, the vast majority of the NFIP  
9 policies have a 30-day waiting period. So this is what  
10 we believe best reflects the situation immediately  
11 preceding Harvey.

12 Q. Okay. You can take a seat. I'm going to ask  
13 you just a few more questions.

14 THE COURT: Can we identify the flip chart?

15 MS. DUNCAN: Yes, Your Honor. And I actually  
16 would like to mark it as Defendants' Exhibit 935 and  
17 offer it into evidence.

18 THE COURT: Well, the transcript of the  
19 testimony is evidence. It's a demonstrative.

20 Mr. Easterby?

21 MR. EASTERBY: Your Honor, I have no  
22 objection to it being admitted as a demonstrative. I  
23 suppose I can take a picture of it or something like  
24 that, but --

25 THE COURT: All right. Let's identify it as

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1 DDX something.

2 MS. DUNCAN: DDX11.

3 And, before I sit down, I'll put a sticker on  
4 it, Your Honor. And we'll take a picture. And  
5 tomorrow we will offer it into the record.

6 BY MS. DUNCAN:

7 Q. Dr. Asche, looking at this chart you've just  
8 created, how do the residential market penetration  
9 rates for Harris County compare to those for the  
10 nation?

11 A. They're approximately seven times the  
12 residential market penetration rate for the nation as a  
13 whole.

14 Q. Okay. And how do the rates for Fort Bend  
15 County compare to the nationwide rates?

16 A. They're a little over six times the national  
17 average.

18 MS. DUNCAN: Your Honor, I have no further  
19 questions. I'd like to approach to put a demonstrative  
20 exhibit sticker on the chart.

21 THE COURT: Thank you.

22 Mr. Easterby, cross-examination.

23 I have a couple of questions I'd like to ask,  
24 but I'll wait until after the cross-examination is  
25 concluded.

1 CROSS-EXAMINATION

2 BY MR. EASTERBY:

3 Q. Dr. Asche, when did you go to MIT?

4 A. Between 2001 and 2005.

5 Q. Okay. My brother went there a little earlier  
6 than you. Just curious about that.

7 So chief, insurance analytics, for FEMA or  
8 for NFIP?

9 A. For the federal insurance directorate, which  
10 is under FEMA and under FIMA, the Federal Insurance and  
11 Mitigation Administration.

12 Q. Okay. You talked about a culture of  
13 preparedness.

14 A. Yes, sir.

15 Q. And is that getting at educating the public  
16 about their flood risks in the hopes that they'll buy  
17 flood insurance?

18 A. Can you rephrase the question, please.

19 Q. Sure.

20 Well, I mean, the goal is to get as many  
21 folks into NFIP-backed policies as possible; right?

22 A. The goal is to close the insurance gap,  
23 whether it's flood insurance, renters insurance, or  
24 homeowners insurance, the specific goal that I was  
25 mentioning.

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1 Q. But your expertise and involvement is  
2 specific to flood insurance?

3 A. Yes.

4 Q. NFIP; right?

5 So that gap would be -- ostensibly, some  
6 folks may have a flood risk, but they're not insured;  
7 right?

8 A. That is true.

9 Q. That's the gap; yes?

10 A. Yes.

11 Q. And so the best place for those folks to get  
12 information about their flood risk would be from a FEMA  
13 flood insurance rate map; correct?

14 A. I don't know.

15 Q. Really?

16 What is -- what does NFIP use in terms of  
17 determining if someone's in a floodplain?

18 A. Could you be a little bit more specific?

19 Q. Sure.

20 When you go out and buy an NFIP-backed  
21 policy, are there rate differences for folks that are  
22 in a 100-year or a 500-year floodplain?

23 A. Yes. That is one of the factors that  
24 differentiates the difference in price between  
25 policies.

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1 Q. And NFIP won't even write a policy if you're  
2 actually in the floodway; right? I mean, the floodway  
3 being the actual creek or bayou or whatever? That's  
4 correct, isn't it?

5 A. The regulatory floodway?

6 Q. Yes.

7 A. Yes.

8 Q. And when you say "regulatory," that's from a  
9 FEMA insurance rate map; correct?

10 A. (No audible response.)

11 Q. Would it help you to see one?

12 A. No.

13 Q. Understandable.

14 Can you answer the question I asked, though,  
15 please.

16 A. A -- a FEMA flood map does show a regulatory  
17 floodway, yes.

18 Q. And you know that federally insured lending  
19 institutions require borrowers to have flood insurance  
20 if they're in a FEMA-designated 100-year floodplain;  
21 yes?

22 A. Yes.

23 Q. And those federally insured banks, if the  
24 person doesn't, they will put in forced place flood  
25 insurance, won't they?



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1 A. Yes.

2 Q. That's totally a function of what's depicted  
3 on the FEMA flood insurance rate maps; right?

4 A. The mandatory purchase requirement, yes.

5 Q. Right. So just -- I'm sorry if my question  
6 was unclear.

7 Let's say you got somebody that's about to  
8 buy a house. And they go to the bank, and they're  
9 told, hey, you're in a 100-year flood zone.

10 You with me so far?

11 A. I am.

12 Q. The bank is looking at a FEMA flood insurance  
13 rate map to make that assessment; yes?

14 A. Yes.

15 Q. That's it. I mean, that's the map they use;  
16 they don't use anything else. Right?

17 A. Lenders have the ability to ask people to  
18 meet higher than the minimum standards, but the  
19 standard is the FEMA designation of in or out.

20 Q. Right. They don't use, like -- I don't  
21 know -- some kind of topographic map that USGS puts  
22 out. They don't use that, do they?

23 A. I am not a lender. I'm sorry.

24 Q. But you're very well conversant with the NFIP  
25 rules that relate to this very subject, aren't you?

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1 A. I am.

2 Q. And they only use a flood insurance rate  
3 maps. That's it?

4 A. I -- I, again, I'm really sorry. I'm not a  
5 lender. I only know what -- what the rules say. FEMA  
6 is not responsible for enforcing the mandatory purchase  
7 requirement. I'm sorry.

8 Q. Understood. So have you been to Houston  
9 before this trial?

10 A. No, sir.

11 Q. And where are you from?

12 A. Originally, I am from Washington state.

13 Q. Washington state.

14 Have you ever been to Rhode Island, by any  
15 chance?

16 A. I have been to Rhode Island.

17 Q. Did you know that Harris County is  
18 70 percent -- 71 percent bigger than the state of Rhode  
19 Island?

20 A. I did not know that.

21 Q. So the graph that you were kind enough to put  
22 together, which is DDX11, when it says 21 percent of  
23 Harris County had an NFIP-backed flood insurance policy  
24 prior to Harvey, you're talking about an area that is  
25 71 percent bigger than the state of Rhode Island;

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1 correct?

2 A. If -- if your statement that Harris County is  
3 71 percent bigger than Rhode Island, yes, physically,  
4 land area, that is correct.

5 Q. And for the record, I googled it. So it may  
6 not be totally accurate, but I do know it is bigger.

7 You haven't done any kind of analysis  
8 about -- what did you call it? The penetration --  
9 penetration rate or something? Residential market  
10 penetration rate; right? Is that the right term?

11 A. Yes.

12 Q. And you hadn't done any kind of analysis of  
13 what the residential market penetration rates for the  
14 areas that are behind the Addicks Dam that are subject  
15 to being submerged by water that's being held back by  
16 the government's flood control project; correct?

17 A. That is correct.

18 Q. So you don't know if that's 21 percent?  
19 3 percent? 1 percent? No idea?

20 A. That is correct.

21 Q. Would it surprise you to learn that it's  
22 substantially lower than the rest of Harris County?

23 A. I don't know how to answer that question.

24 Q. Well, let me ask you this way. Like, my  
25 house now is in Zone X, which is no flood zone; right?

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1 A. That is not necessarily precisely true.

2 Q. Okay.

3 A. That is not in the defined special flood  
4 hazard area at this point.

5 Q. Right. So there's the AE. That's 100-year;  
6 right?

7 A. Yes.

8 Q. Then the 500-year is, like, shaded X, I  
9 think?

10 A. Yes, the 500-year is shaded X.

11 Q. And then there's just the white area, which  
12 is nothing.

13 A. It is -- it is not necessarily no floodplain,  
14 but it is not an area that has been defined as having a  
15 specific hazard that you're talking about with AE and  
16 shaded X.

17 Q. Right. So when you talk about closing the  
18 gap, y'all are really focused on the places that have  
19 the biggest risk of being flooded; right?

20 A. I don't think that's true, no.

21 Q. Just doesn't matter if it's someplace that  
22 floods four or five times in a five-year stretch or  
23 it's never flooded?

24 A. When we talk about the closing -- the  
25 insurance gap, we reference the national numbers as

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1 being a huge -- huge protection gap, so ...

2 Q. I meant to ask you also, you haven't done any  
3 analysis for Fort Bend County specific to the areas  
4 behind the Barker Dam that are at risk of being  
5 submerged by runoff held back by the Barker  
6 embankments. It's just for Fort Bend County as a  
7 whole?

8 A. Correct.

9 Q. Okay. Oh, one last question. Does a  
10 standard NFIP policy cover losses from  
11 government-induced flooding?

12 A. A standard NFIP policy covers losses that  
13 meet the definition of a flood.

14 Q. Well, it's a standard policy; right? NFIP  
15 has a standard prescribed flood insurance policy  
16 everywhere across the United States; true?

17 A. There are three policy forms.

18 Q. And they all have the same language regarding  
19 what is a covered loss?

20 A. And what is the -- the definition of a  
21 general condition of flooding.

22 Q. Sure. So -- and you talked about the  
23 write-your-own private insurance companies that do  
24 flood insurance? Or maybe you talked a little bit  
25 about it, but that's -- that's a thing; right? It's

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1 write-your-own. You could have a private insurance  
2 company that acts as third-party administrator for  
3 NFIP, but that private company, it doesn't bear the  
4 risk of loss under the policy?

5 A. Private companies that participate in the  
6 write-your-own self-paid do not bear the financial risk  
7 of loss under the NFIP; the federal government does.

8 Q. The federal government bears the risk of loss  
9 of every single flood insurance policy out there in the  
10 United States?

11 A. That is incorrect. There are private flood  
12 insurance policies.

13 Q. You got me. But residential NFIP backs,  
14 that's all --

15 A. National flood insurance policies are covered  
16 by the federal government.

17 Q. Okay. So and your familiar with those three  
18 versions of the policies. Yes?

19 A. Very high level.

20 Q. Okay. I just want to know, do you know if a  
21 standard residential NFIP policy covers losses from  
22 government-induced flooding?

23 A. If that government-induced flooding meets our  
24 definition of a general condition of flooding. So in  
25 the -- in the code of -- or the regulations behind the

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1 National Flood Insurance Program, we have a definition  
2 for a general condition of flooding.

3 Q. What is the definition, if you know?

4 A. I do not know the specific definition off the  
5 top of my head.

6 Q. So -- and I understand it's hard and maybe  
7 even a little bit unfair to try to ask you that, but  
8 what is your understanding of what the general  
9 condition of flooding definition is?

10 A. So -- okay. Two or more acres of normally  
11 dry land or two or more properties that have  
12 experienced that -- that have water on them. The cause  
13 of the flood, whether it's rain, hurricane, tidal  
14 surge, overflow of a lake, any other way that water  
15 goes somewhere is not specified as the -- the reason  
16 for coverage or noncoverage.

17 Q. So two or more acres of normal dry land or  
18 two or more properties are inundated by water or  
19 mudflow. Is that essentially what you just said?

20 A. Are you reading the definition of a general  
21 condition of flooding? It sounds very similar to my  
22 understanding. I do not know the exact definition off  
23 the top of my head.

24 Q. Okay. I've read it. I've actually been a  
25 recipient of NFIP money on two occasions so far in my

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1 former residence.

2 Does it specifically address  
3 government-induced flooding as a covered loss?

4 A. I don't think so, but I do not know.

5 Q. I don't think so either.

6 MR. EASTERBY: Thank you, Doctor, for your  
7 time today.

8 I will pass the witness.

9 MS. DUNCAN: No further questions.

10 THE COURT: The Court has a set of questions.

11 MS. DUNCAN: Then I may reserve.

12 THE COURT: May I ask them?

13 MS. DUNCAN: Yes, Your Honor.

14 THE COURT: Dr. Asche, I didn't understand  
15 DDX11. When you listed the percentages of residential  
16 market penetration rates for national, Harris County,  
17 and Fort Bend County, was that just the rate percentage  
18 for those homes or residences that were within the  
19 100-year floodplain?

20 THE WITNESS: No. Those are for the -- the  
21 counties as a whole.

22 THE COURT: So it's all the properties in the  
23 county?

24 THE WITNESS: It's all the properties in the  
25 county.



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1 THE COURT: Flood zone or not?

2 THE WITNESS: Yes, sir.

3 THE COURT: All right. Do you have a market  
4 penetration rate for the properties in a 100-year flood  
5 zone?

6 THE WITNESS: Yes.

7 THE COURT: What is that called?

8 THE WITNESS: It is the residential market  
9 penetration rate, but it's specifically within that  
10 SFHA.

11 THE COURT: Do you know what the percentages  
12 are on the particular three types of areas you listed  
13 on your chart?

14 THE WITNESS: Yes.

15 THE COURT: Could you add them to your chart?

16 THE WITNESS: I could.

17 THE COURT: Would you, please.

18 THE WITNESS: Yes. Do you mind if I just use  
19 one of the pens up here? It will be a different color.

20 THE COURT: No. That's fine.

21 THE WITNESS: So I'm adding a column, and  
22 this is just SFHA penetration rate. So this is the  
23 100-year floodplain that we were talking about. And  
24 these rates for the nation, approximately 30 percent of  
25 the nation as a whole in the special flood hazard area

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1 has flood insurance --

2 THE COURT: Yes.

3 THE WITNESS: -- or had flood insurance as of  
4 October 31, 2017. In Harris County, it was  
5 approximately 43 percent. And in Fort Bend County, it  
6 was approximately 26 percent.

7 THE COURT: Thank you. Before you leave your  
8 chart, do you know what the rate is subsequent to  
9 Hurricane Harvey?

10 THE WITNESS: I know that the rates are much  
11 higher. I have approximate numbers in my brain, but I  
12 don't feel as confident in these numbers that I've  
13 been -- you know, getting ready for today.

14 Would you like me to -- to put a -- they've  
15 gone up. All of them have gone up.

16 THE COURT: Why don't -- underneath the word  
17 "nation" and "Harris County" and "Fort Bend County,"  
18 could you just write an estimate? Could you just write  
19 what you think the numbers approximate?

20 THE WITNESS: So this is going to be the  
21 county as a whole --

22 THE COURT: All right.

23 THE WITNESS: -- right now? Is that what  
24 you're --

25 THE COURT: Yes.

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1 THE WITNESS: Okay. So Harris is about -- I  
2 think it's about up to 48 percent.

3 THE COURT: That's compared to 21 percent; is  
4 that correct?

5 THE WITNESS: I would -- I would love to be  
6 able to get back to you on that, if that is possible.

7 THE COURT: You can't do that.

8 THE WITNESS: Okay. All right. All right.

9 THE COURT: I'm sorry.

10 Mr. Easterby?

11 MR. EASTERBY: And I hope I'm not speaking  
12 out of turn. I just thought maybe we could take a  
13 lunch break and give the witness a chance to get  
14 reliable information on this subject, which I think is  
15 important.

16 THE COURT: Well, Dr. Asche might be able to  
17 do that or might not.

18 Ms. Duncan?

19 MS. DUNCAN: At your pleasure, Your Honor.

20 THE COURT: I'm sorry?

21 MS. DUNCAN: At your pleasure. Whatever you  
22 prefer.

23 THE COURT: Well, it is a little after noon.

24 Dr. Asche, do you mind?

25 THE WITNESS: I can get them in 15 seconds if

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1 I'm allowed to get them, sir.

2 THE COURT: All right.

3 THE WITNESS: I have them written down. They  
4 are not here with me.

5 THE COURT: Now, we're talking about the  
6 nation as a whole --

7 THE WITNESS: Yep.

8 THE COURT: -- after Harvey.

9 THE WITNESS: The nation as a whole after  
10 Harvey, I can say with confidence is about 4 percent.

11 THE COURT: And then in the 100-year  
12 floodplain, can you give those numbers after Harvey?

13 THE WITNESS: About 30 percent still.

14 THE COURT: Let's find out.

15 THE WITNESS: Okay.

16 THE COURT: May we take our luncheon recess  
17 at this point?

18 MR. EASTERBY: Yes, Your Honor.

19 MS. DUNCAN: And, Your Honor, I will have a  
20 few redirect questions then.

21 THE COURT: I guessed as much. Thank you  
22 very much.

23 THE CLERK: All rise. Our court is in  
24 recess.

25 (Whereupon a luncheon recess was taken.)

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1 THE CLERK: All rise. United States Court of  
2 Federal Claims is now in session, the Honorable Charles  
3 F. Lettow presiding.

4 THE COURT: Please be seated.

5 Dr. Asche, welcome back.

6 THE WITNESS: Thank you, sir.

7 THE COURT: Hopefully, you had a decent lunch  
8 while you were working. We'll find out.

9 Ms. Duncan?

10 Let me just find out. Mr. Easterby, I take  
11 it you have -- I'll give you a chance to ask redirect  
12 because I asked some questions of Dr. Asche.

13 MR. EASTERBY: Yes, sir.

14 THE COURT: Ms. Duncan, you may proceed.

15 MS. DUNCAN: Your Honor, would you like  
16 Dr. Asche to address your questions just before the  
17 lunch break?

18 THE COURT: That's up to you.

19 MS. DUNCAN: Dr. Asche, are you able to  
20 address the judge's questions?

21 THE WITNESS: I am able to address the  
22 judge's questions.

23 THE COURT: Okay. Go ahead.

24 MS. DUNCAN: And, Your Honor, is it okay for  
25 the witness to step down?

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1 THE COURT: Yes.

2 MS. DUNCAN: Do you need a marker, Dr. Asche?  
3 Excellent.

4 THE WITNESS: Okay. So the numbers that I'm  
5 going to write are as of February of 2019. That is the  
6 most recent penetration rate analysis that my team has  
7 done. Okay?

8 So the nation as a whole -- and this is going  
9 to be as of 2/28/19 -- is approximately 4 percent,  
10 whereas the SFHA is approximately 28 percent for Harris  
11 County. As of 2/28/19, the SF -- or the county as a  
12 whole is 28 percent, and the SFHA is 46 percent. Okay?

13 And then, finally, Fort Bend County, as of  
14 2/28/19, is 34 percent at the county level and  
15 29 percent in the SFHA.

16 THE COURT: Thank you, Dr. Asche.

17 THE WITNESS: You're welcome, sir.

18 REDIRECT EXAMINATION

19 BY MS. DUNCAN:

20 Q. Go ahead and take a seat.

21 Dr. Asche, Mr. Easterby asked you some  
22 questions about when NFIP claims were actually paid.  
23 Do you recall some of those questions?

24 A. Yes, ma'am.

25 Q. Okay. Does your branch maintain information

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1 about NFIP claims that are paid?

2 A. Yes, ma'am.

3 Q. And have you gathered -- are you familiar  
4 with information about NFIP claims made in Harris  
5 County, Fort Bend County, and Waller County for this  
6 litigation?

7 A. Generally, yes.

8 Q. Okay. Now, Dr. Asche, were any of the test  
9 properties in the upstream case that we're dealing with  
10 now paid on their NFIP flood insurance policies  
11 following Hurricane Harvey?

12 THE COURT: Mr. Easterby?

13 MR. EASTERBY: Your Honor, I did make a  
14 reference to my own personal situation, but I didn't  
15 ask any questions about NFIP claim payments in my cross  
16 of the witness.

17 THE COURT: Overruled.

18 THE WITNESS: Yes. My understanding, yes.

19 BY MS. DUNCAN:

20 Q. Okay.

21 MS. DUNCAN: No further questions.

22 THE COURT: All right. Thank you.

23 Mr. Easterby?

24 MR. EASTERBY: Thank you, Judge. I'll be  
25 very brief and limit it to the new information.

1                                    RECROSS-EXAMINATION

2        BY MR. EASTERBY:

3            Q.    So, Dr. Asche, you'd take some statistics  
4        course at MIT in pursuing your doctorate?

5            A.    I -- I have taken statistics courses in  
6        pursuing my doctorate, yes.

7            Q.    So the new information, it appears to  
8        indicate that, for Harris County for folks that were in  
9        the 100-year or SFHA, how big of an increase was it  
10       between before Harvey and after Harvey?

11          A.    There's a 3 percent difference.

12          Q.    It's not a trick question. I just wanted to  
13       make sure I was understanding what you wrote.

14                   And then, in Fort Bend, same question. It  
15       looks like -- what? -- a 3 percent increase?

16          A.    Yes, sir.

17          Q.    And then countywide you're seeing bigger  
18       increases, are you not, for Fort Bend? It's the  
19       difference between 34 and 19?

20          A.    Yes, sir.

21          Q.    And for Harris it's a 7 percent increase?

22          A.    Yes, sir.

23          Q.    Are you aware that, in the area behind the  
24       Barker Dam in Fort Bend County, there's not any  
25       residential land that's in a 100-year FEMA-regulated



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1 floodplain?

2 A. I am not aware of that.

3 Q. Does this information suggest to you that  
4 folks that are in the special flood hazard area are  
5 more likely to buy flood insurance than those that are  
6 not, or can you make a conclusion either way?

7 A. I don't -- I don't quite understand the  
8 question. I'm sorry. Can you ask it a different way.

9 Q. So the goal is to get more market penetration  
10 with folks that have flood risk; right?

11 A. The goal is to have more market penetration  
12 with everyone.

13 Q. With everyone. Okay.

14 Oh, I wanted to ask you again about that --  
15 do you know if the policy -- the standard policy for a  
16 dwelling under the NFIP covers flood claims associated  
17 with government-induced flooding? Do you remember  
18 that?

19 A. I do remember that question.

20 Q. I was able to get my hands on one of those  
21 policies during the break.

22 And, with the Court's permission, I'd like to  
23 put it up just as a demonstrative so the witness can  
24 see the language and if she can answer the question, if  
25 that's okay.

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1 MS. DUNCAN: Counsel, do you have a copy of  
2 this?

3 THE COURT: I'm sorry.

4 Ms. Duncan?

5 MS. DUNCAN: Counsel, do you have a copy of  
6 this?

7 MR. EASTERBY: I actually don't. I literally  
8 just pulled it off the web. And we can all look at it  
9 together or -- I'm asking.

10 MS. DUNCAN: If the witness has familiarity  
11 with this, that's fine. But I don't know that that's  
12 been established yet.

13 THE COURT: Well, it's not truly recross, but  
14 it goes back to your cross.

15 On the other hand, Dr. Asche might be  
16 familiar with it. Let's find out.

17 We ought to identify it as a demonstrative.

18 MR. EASTERBY: Yes, sir. So we'll identify  
19 this as PEX No. 8. It appears to be a National Flood  
20 Insurance Program dwelling form, standard flood  
21 insurance policy, F1 -- strike that --  
22 F-1224/October 2015, bearing the seal of the Department  
23 of Homeland Security and with the FEMA initials after  
24 that.

25 BY MR. EASTERBY:

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1 Q. You see that, Doctor?

2 A. I see that.

3 MR. EASTERBY: Matt, if we could step through  
4 the second page. I believe that there --

5 THE COURT: Mr. Easterby, we really need to  
6 know whether Dr. Asche is familiar with it or not.

7 MR. EASTERBY: Yes, sir.

8 BY MR. EASTERBY:

9 Q. Dr. Asche, I know I'm kind of springing this  
10 on you. So, in fairness to you, are you at all  
11 familiar with this dwelling form? If you're not,  
12 you're not; if you are, you are.

13 Let us know.

14 A. I have read the dwelling form, but my branch  
15 is not responsible for interpreting the standard flood  
16 insurance policy language that is in the dwelling form.

17 MS. DUNCAN: Objection, Your Honor. We  
18 object to lack of foundation. Further, this is beyond  
19 the scope of my redirect.

20 THE COURT: Would you state your last part of  
21 your statement again.

22 MS. DUNCAN: Yes, Your Honor.

23 These questions are beyond scope of my  
24 redirect.

25 THE COURT: Mr. Easterby?

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1 MR. EASTERBY: Your Honor, I would just like  
2 to show her the definition we talked about earlier, if  
3 that refreshes her recollection to be able to answer  
4 the question, and that will be it.

5 THE COURT: That's allowed.

6 MR. EASTERBY: Thank you, Your Honor.

7 Second page, Matt. Please zoom into the  
8 flood definition. This is page 1 of 26 of PEX88.

9 BY MR. EASTERBY:

10 Q. Do you see that definition, Doctor?

11 A. I do see that definition.

12 Q. So, based on that definition, do you know  
13 whether or not government-induced flooding would be a  
14 covered loss under this NFIP dwelling policy?

15 A. I do not feel like I'm in a position to be  
16 able to answer that question for you.

17 Q. Fair enough. Thank you for your time today,  
18 Doctor. I appreciate it.

19 MR. EASTERBY: I'll pass the witness.

20 THE COURT: Ms. Duncan, are you ready?

21 MS. DUNCAN: One more question.

22 THE COURT: Yes.

23 FURTHER REDIRECT EXAMINATION

24 BY MS. DUNCAN:

25 Q. Are you familiar with whether any of the test

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1 properties in this upstream case have made a claim  
2 after Hurricane Harvey and were paid on that claim?

3 A. Yes.

4 Q. And what's your familiarity with that?

5 A. I am familiar with one property that has made  
6 a claim and been paid.

7 Q. And that property is a test property in this  
8 case?

9 A. Yes.

10 MS. DUNCAN: No further questions.

11 THE COURT: Thank you.

12 May the Court excuse Dr. Asche?

13 MR. EASTERBY: Yes, Your Honor.

14 MS. DUNCAN: Yes, Your Honor.

15 THE COURT: Thank you, Dr. Asche. Thank you  
16 for coming. Are you in Washington? Are you based in  
17 Washington?

18 THE WITNESS: I am based in Washington, D.C.,  
19 sir.

20 THE COURT: All right. Thank you very much.  
21 Thank you for coming and thank you for testifying.

22 Mr. Chellis.

23 MR. CHELLIS: Your Honor, the United States  
24 calls Michael Nakagaki.

25 THE COURT: Thank you.

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1                   Mr. Nakagaki, stop right there and raise your  
2     right hand to be sworn as a witness.  
3     Thereupon--

4                   MICHAEL NAKAGAKI,  
5     was called as a witness, and having been first duly  
6     sworn, was examined and testified as follows:

7                   THE WITNESS: Yes.

8                   THE COURT: Thank you. Please be seated in  
9     the witness stand.

10                   DIRECT EXAMINATION

11     BY MR. CHELLIS:

12                 Q. Please introduce yourself.

13                 A. My name is Michael Nakagaki, and I am a  
14     program specialist within the mapping section of the  
15     NFIP at FEMA.

16                 Q. Mr. Nakagaki, how long have you worked at  
17     FEMA?

18                 A. I have worked at FEMA for over four years  
19     now.

20                 Q. And what's your job title again?

21                 A. My title is a program specialist.

22                 Q. And what is it that you do as a program  
23     specialist?

24                 A. As a program specialist, I use my knowledge  
25     of the mapping program to address inquiries that come

1 into the section as well as to support the region in

2 their delivery of flood hazard maps to communities.

3 Q. And what's your educational background?

4 A. My highest education is a master's in  
5 geoscience from Virginia Tech.

6 Q. Where were you working before FEMA?

7 A. Before FEMA, I worked at two contractors for  
8 FEMA. The first was a company called Dewberry. The  
9 second was a company called Michael Baker Corp. And,  
10 for both of those positions, I was supporting primarily  
11 a call center to assist callers to locate flood  
12 insurance rate maps through FEMA's map service center  
13 website.

14 Q. And if a caller wanted a flood map, what was  
15 the process for that?

16 A. I would assist them with the map service  
17 center website. It's an online tool for people to type  
18 in their address, find a FIRM panel near their  
19 property, and then print what's called a FIRMette,  
20 which is a way to print a section of the overall FIRM  
21 so that way the scale can be maintained, but -- as  
22 opposed to printing a 2-foot-by-3-foot map, that a  
23 specific section could be printed on a typical  
24 11-by-8 ½ sheet.

25 Q. When did FIRMettes become available to the

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1 public?

2 A. Those became available around the mid 2000s.

3 Q. And what's your understanding of why FEMA  
4 made these FIRMettes available to the public?

5 A. The reason is the FIRM panel itself, again,  
6 is -- when printed to scale, is 2 feet by 3 feet. And  
7 there's a lot of details that are included on that,  
8 including roads and other features from the local  
9 community.

10 If that entire map is shrunk down itself to  
11 about the 11 by 8 ½, a lot of those features can be  
12 either distorted or too small to read accurately. So  
13 the FIRMette is a way to maintain that scale and that  
14 level of detail while still being accurate to be able  
15 to measure things from one location to the other and  
16 ensure that the scale is maintained.

17 MR. CHELLIS: Let's pull up DX183.

18 Your Honor, this has already been admitted as  
19 Upstream 461.

20 THE COURT: Upstream 461?

21 MR. CHELLIS: Correct.

22 THE COURT: Let's use that number.

23 BY MR. CHELLIS:

24 Q. Are you familiar with this document?

25 A. Yes, I am.



1 Q. And what is it?

2 A. This is a flood insurance rate map panel for  
3 Harris County, Texas.

4 Q. And what's the date on the map?

5 A. It says that this became effective in 2007.

6 Q. Now, if I'm trying to determine what flood  
7 zone my home is located in, what am I looking at on  
8 this map?

9 A. You would locate where your property is based  
10 on the road names that are available on this map and  
11 then determine which of these shaded areas the property  
12 falls within.

13 Q. Can you speak to the flood zones in the area  
14 marked "Legend"?

15 A. Yes. So these explain the different shading  
16 on the flood insurance rate map panel itself. The  
17 darkish shading are the zones that begin with the  
18 letters A or B. And this is the special flood hazard  
19 area, so this is the area that is subject to the  
20 1 percent annual chance of flood.

21 That means that, given a hypothetical flood  
22 event that has a 1 percent chance of occurring any  
23 given year, this is the projected area that would be  
24 inundated.

25 On this legend, there's also the floodway

1 areas, which would be the SFHA with those  
2 cross-hatchings.

3 And then there is the medium gray area that's  
4 labeled "Other Flood Areas." Those are going to be  
5 labeled either X with shading, or, on some of the older  
6 maps, that would be Zone B. And this is the area  
7 that -- when it's depicting a flooded area, that --  
8 it's the area that's associated with the 0.2 percent  
9 annual chance of flood. So that is a flood that would  
10 have a 0.2 percent chance of occurring any given year.

11 And then the remaining areas outside of that  
12 would be X unshaded. And that is the area that is  
13 outside of the .2 percent floodplain. On the older  
14 maps, that may be labeled as a Zone C.

15 Q. How do you determine which areas warrant a  
16 particular flood designation?

17 A. That's determined through the flood insurance  
18 study process. So, through that process, the FEMA  
19 region, working with our mapping partners, gather all  
20 of the applicable hydraulic and hydrologic information,  
21 as well as past flooding events and topographic  
22 information, and use that information and input it into  
23 a model to come up with these projections of high -- of  
24 how high the flooding is projected to be. And that is  
25 then intersected with the topography of the area to

1 determine what area would flood.

2 Q. You talked about 1 percent, 0.2 percent, and  
3 less than 0.2 percent. Are there more generic ways of  
4 describing what those flood hazards zones mean to,  
5 like, a homeowner?

6 A. Yes. The 1 percent annual chance of flood is  
7 sometimes called the 100-year storm. And the  
8 .2 percent floodplain is sometimes called the 500-year  
9 storm.

10 Q. And the less than 0.2 percent chance?

11 A. And that would be the area that's outside of  
12 the .2 percent annual chance floodplain. So that's the  
13 area that would be subject to a flood event that would  
14 be more severe but less statistically likely than  
15 .2 percent any given year.

16 Q. Does that mean that that less than  
17 0.2 percent area would never flood?

18 A. No. That area has a -- a lower probability,  
19 but there is a chance that that area would flood.

20 Q. Can a flood hazard area change over time?

21 A. Yes, it can, based on the -- again, the  
22 inputs that go into the modeling. So hydraulics and  
23 changes in topography or even changes in development  
24 can all influence the flooding patterns of the area,  
25 which would then change the projected 1 percent annual

1 chance floodplain.

2 Q. On the right-hand side of this map, there are  
3 squiggly -- well, it's squiggly lines that read "103"  
4 and "104." What do those indicate on the map?

5 A. Those indicate the base flood elevations. So  
6 the 1 percent annual chance flood is also known as the  
7 base flood. And so what these elevations show is the  
8 projected flooding heights given that hypothetical  
9 flood.

10 Now, the important thing to keep in mind is  
11 that these elevations are not elevations above ground.  
12 These are above a set datum. So it's basically above  
13 sea level.

14 Q. Mr. Nakagaki, are you aware of the trial  
15 properties in this case?

16 A. Yes, I am.

17 Q. And how are you aware of those?

18 A. I'm aware of those through the support that  
19 I've done in creating 13 map books for each property.

20 Q. Do you see any trial properties on this  
21 particular map?

22 A. Yes. The West Houston Airport is labeled on  
23 this map on the lower left-hand corner.

24 Q. Now, Mr. Nakagaki, you spoke just now the map  
25 books that you created for this case. Can you describe

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1 more about what you were asked to do.

2 A. We were provided with GIS information about  
3 specific property locations as well as the date of  
4 acquisition for each of those properties. We then used  
5 that information to identify the -- where those  
6 properties fell on the current affected maps as well as  
7 on the map that was in effect at the time of  
8 acquisition, or, in two cases, the map that became in  
9 effect -- into effect as close to that date of  
10 acquisition as possible.

11 MR. CHELLIS: Let's pull up JX286.

12 BY MR. CHELLIS:

13 Q. Do you recognize this document?

14 A. Yes, I do.

15 Q. What is it?

16 A. This is the map book for the Micu property.

17 Q. And how did you know the location of the Micu  
18 property?

19 A. That information was provided to us by the  
20 DOJ.

21 Q. And how did you know when this property was  
22 acquired?

23 A. That information was also provided to us by  
24 DOJ.

25 MR. CHELLIS: Your Honor, we move to admit

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1 JX286.

2 THE COURT: Mr. Vujasinovic?

3 MR. VUJASINOVIC: I haven't seen what's  
4 behind it. I'm sorry.

5 MR. CHELLIS: I'm about to have him go  
6 through a walk-through of the map book if that helps.

7 THE COURT: Well, it might, but it would help  
8 to have at least one version of it on the screen or  
9 otherwise available.

10 BY MR. CHELLIS:

11 Q. This is just the title page.

12 Can we flip to the next page.

13 Mr. Nakagaki, can you give us a high-level  
14 walk-through of the map book.

15 A. Sure.

16 So on the -- the page that's being displayed  
17 now, FEMA080999, this page provides a definition and  
18 the zones associated with the high-, moderate-, and  
19 low-hazard areas.

20 The next page, which is FEMA081000, shows the  
21 legend from the following flood insurance rate map  
22 images to provide an explanation of what the shading  
23 means.

24 The next page, FEMA081001, this shows the map  
25 that was in effect when the Micu property was acquired.

1 On the lower end of the map, it has the property name,  
2 the address, the flood zone that the property is shown  
3 to be in, as well as information about the panel  
4 itself, including when that map became effective and  
5 when it was superseded, meaning when the next version  
6 of a FIRM replaced it.

7 On the next page, which is FEMA081002, this  
8 is a zoomed-in view of the property to better see where  
9 the property is in relation to the flood zone.

10 The next page, which is FEMA081003, this  
11 shows the current effective flood insurance rate map  
12 for the property. And then it also shows the property  
13 name, address, flood zone, and the date that that map  
14 became effective.

15 The final page, which is FEMA081004, again  
16 shows a close-up of the Micu property on the current  
17 effective FIRM.

18 Q. And if we go back to the first map listed,  
19 it's on FEMA081001. What flood zone is the Micu  
20 property located in?

21 A. The Micu property is shown to be within the  
22 shaded X zone.

23 MR. CHELLIS: Your Honor, we'd move to admit  
24 JX286.

25 THE COURT: Thank you, Mr. Challis.

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1 Mr. Vujasinovic?

2 MR. VUJASINOVIC: No objection.

3 THE COURT: Admitted.

4 (Whereupon, Joint Exhibit 286 was  
5 admitted into evidence.)

6 BY MR. CHELLIS:

7 Q. Now, Mr. Nakagaki, we're going to go through  
8 12 exhibits that are similar and that contain the same  
9 type of information as the Micu property map book.

10 A. Okay.

11 MR. CHELLIS: Your Honor, the DX exhibits  
12 will be in DX binder 24, and the JX exhibits will be in  
13 JX binder 10.

14 Now turning to DX806 --

15 THE COURT: Is this a JX exhibit?

16 MR. CHELLIS: This is a DX, Your Honor.

17 THE COURT: DX?

18 MR. CHELLIS: DX806.

19 THE COURT: Thank you.

20 THE WITNESS: Okay.

21 BY MR. CHELLIS:

22 Q. What is the property shown on DX806?

23 A. This is for the Banker property.

24 Q. And how did the preparation of DX806 compare  
25 to the preparation of the Micu map book?



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1           A.     This was created using the same methodology;  
2     however, in this case the date of acquisition was after  
3     the current effective maps, meaning that both the --  
4     the map that showed the current effective map -- flood  
5     insurance rate map as well as the flood insurance rate  
6     map at time of acquisition were the same. So there's  
7     only one map in this book.

8           Q.     We're looking at DX806?

9           A.     Yes. Wait. No. I apologize. I had the  
10    wrong property map.

11          Q.     That's okay, Mr. Nakagaki.

12          A.     Yes.

13          Q.     Have you found the correct DX number?

14          A.     Yes, I have.

15          Q.     And can you turn to that exhibit?

16          A.     Yes. 06.

17                 MR. CHELLIS: Your Honor, we move to admit  
18    DX806.

19                 MR. VUJASINOVIC: No objection.

20                 THE COURT: Does this relate to the Banker  
21    property?

22                 MR. CHELLIS: Yes. Yes, Your Honor.

23                 THE COURT: Because at least have that right.  
24    Admitted.

25                         (Whereupon, Defendants' Exhibit 806 was

1 admitted into evidence.)

2 BY MR. CHELLIS:

3 Q. Now, what does DX806 tell us about the flood  
4 hazard at the time that the Banker property was  
5 acquired?

6 A. It says that the -- this property was in the  
7 shaded X zone at the date of acquisition.

8 Q. And what does DX806 tell us about the more  
9 current flood hazard for the Banker property?

10 A. For the current effective FIRM, the Banker  
11 property is in shaded zone X.

12 Q. Turning to DX807. What is the property shown  
13 in this map book?

14 A. This is the Burnham property.

15 Q. And how did the preparation of DX807 compare  
16 to the preparation of the Micu map book?

17 A. This is the map book that -- where the  
18 current effective map and the map at the date of  
19 acquisition was the same. Other than that, the same  
20 process was used to create this map book.

21 MR. CHELLIS: Your Honor, we move to admit  
22 DX807.

23 MR. VUJASINOVIC: No objection.

24 THE COURT: Admitted.

25 (Whereupon, Defendants' Exhibit 807 was

1 admitted into evidence.)

2 BY MR. CHELLIS:

3 Q. What does DX807 tell us about the flood  
4 hazard at the time the Burnham property was acquired?

5 A. This property was in the zone AE at the time  
6 of acquisition.

7 Q. And we're moving on to the JXs.

8 What is the property shown on JX283? And  
9 I'll give you a moment to find that.

10 A. 283. This is for the Giron property.

11 Q. And how did the preparation of JX283 compare  
12 to the preparation of the Micu property map book?

13 A. This map book was made with the same  
14 methodology as the Micu property; however, the flood  
15 hazard information is specific to this property.

16 MR. CHELLIS: Your Honor, we move to admit  
17 JX283.

18 MR. VUJASINOVIC: No objection.

19 THE COURT: Admitted.

20 (Whereupon, Joint Exhibit 283 was  
21 admitted into evidence.)

22 BY MR. CHELLIS:

23 Q. And what does JX283 tell us about the flood  
24 hazard at the time that the Giron property was  
25 acquired?

1           A.     At the time of acquisition, the Giron  
2     property was in zone X shaded.

3           Q.     And what does JX283 tell us about the more  
4     current flood hazard for the Giron property?

5           A.     On the current effective map, the Giron  
6     property is shown within the X shade -- the shaded X  
7     zone.

8           Q.     Turning to JX284. What is the property shown  
9     on JX284?

10          A.     This is the Holland property.

11          Q.     And how did the preparation of JX284 compare  
12     to the preparation for the Micu map book?

13          A.     This map book was made with the same process  
14     as the Micu property.

15                 MR. CHELLIS: Your Honor, we move to admit  
16     JX284.

17                 MR. VUJASINOVIC: No objection.

18                 THE COURT: Admitted.

19                         (Whereupon, Joint Exhibit 284 was  
20                         admitted into evidence.)

21     BY MR. CHELLIS:

22          Q.     And what does JX284 tell us about the flood  
23     hazard at the time the Holland property was acquired?

24          A.     At the time of acquisition for the Holland  
25     property, it is shown to be within the X unshaded zone.

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1 Q. And what does JX284 tell us about the more  
2 current flood hazard for the Holland property?

3 A. On the current effective map, the map -- the  
4 property is shown to be within the X shaded zone.

5 Q. Turning to JX285. What is the property shown  
6 on JX285?

7 A. This is the Lakes on Eldridge Community  
8 Association property.

9 Q. And how did the preparation of JX285 compare  
10 to the preparation of the Micu property map book?

11 A. This was made with the same process as the  
12 Micu property except that the flood hazard information  
13 is specific to this property.

14 MR. CHELLIS: Your Honor, we move to admit  
15 JX285.

16 MR. VUJASINOVIC: No objection.

17 THE COURT: Admitted.

18 (Whereupon, Joint Exhibit 285 was  
19 admitted into evidence.)

20 BY MR. CHELLIS:

21 Q. What does JX285 tell us about the flood  
22 hazard at the time the Lakes on Eldridge property was  
23 acquired?

24 A. This shows that, at the time of acquisition,  
25 the Lakes on Eldridge Community Association property

1 was in the X unshaded zone.

2 Q. And what does JX285 tell us about the more  
3 current flood hazard for the Lakes on Eldridge  
4 property?

5 A. It shows that the Lakes on Eldridge property  
6 on the current effective maps is in the X unshaded  
7 zone.

8 Q. Turning to JX287. What is the property shown  
9 on JX287?

10 A. That is the Popovici property.

11 Q. And how did the preparation of JX287 compare  
12 to the preparation for the Micu map book?

13 A. This was made with the same process as the  
14 Micu property, however, the flood hazard information  
15 specific to this property.

16 MR. CHELLIS: Your Honor, we move to admit  
17 JX287.

18 MR. VUJASINOVIC: No objection.

19 THE COURT: Admitted.

20 (Whereupon, Joint Exhibit 287 was  
21 admitted into evidence.)

22 BY MR. CHELLIS:

23 Q. And what does JX287 tell us about the flood  
24 hazard at the time the Popovici property was acquired?

25 A. At the time of acquisition, the Popovici

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1 property is shown to be in the X unshaded zone.

2 Q. And what does JX287 tell us about the more  
3 current flood hazard for the Popovici property?

4 A. On the current effective FIRM, Popovici  
5 property is shown to be within the X unshaded zone.

6 Q. Turning to JX288. What is the property shown  
7 on JX288?

8 A. This is the Sidhu property.

9 Q. And how did the preparation of JX288 compare  
10 to the preparation of the Micu map book?

11 A. This was made with the same process, but the  
12 flood hazard information is specific to this property.

13 MR. CHELLIS: Your Honor, we move to admit  
14 JX288.

15 MR. VUJASINOVIC: No objection.

16 THE COURT: Admitted.

17 (Whereupon, Joint Exhibit 288 was  
18 admitted into evidence.)

19 BY MR. CHELLIS:

20 Q. What does JX288 tell us about the flood  
21 hazard at the time the Sidhu property was acquired?

22 A. The date of acquisition, the Sidhu property  
23 is shown to be within the X unshaded zone.

24 Q. And what does JX288 tell us about the more  
25 current flood hazard for the Sidhu property?

1           A.     On the current effective FIRM, Sidhu property  
2     is shown to be within the X unshaded zone.

3           Q.     What is the property shown on JX289?

4           A.     This is the Soares property.

5           Q.     And how did the preparation of JX289 compare  
6     to the preparation of the Micu map book?

7           A.     This was made with the same methodology;  
8     however, the flood hazard information is specific to  
9     this property.

10           MR. CHELLIS: Your Honor, we move to admit  
11     JX289.

12           MR. VUJASINOVIC: No objection.

13           THE COURT: Admitted.

14                     (Whereupon, Joint Exhibit 289 was  
15                     admitted into evidence.)

16     BY MR. CHELLIS:

17           Q.     And what does JX289 tell us about the flood  
18     hazard at the time the Soares property was acquired?

19           A.     At the time of acquisition, the Soares  
20     property is shown to be within the X unshaded zone.

21           Q.     And what does JX289 tell us about the more  
22     current flood hazard for the Soares property?

23           A.     On the current effective map, the Soares  
24     property is shown to be within the X unshaded zone.

25           Q.     Turning to the DXs again. We're going to



1 turn to DX815. I'll give you some time to find that,

2 Mr. Nakagaki.

3 A. Okay.

4 Q. And what is the property shown on DX815?

5 A. This is the Stewart property.

6 Q. And how did the preparation of DX815 compare  
7 to the preparation for the Micu map book?

8 A. This was made with the same methodology, but  
9 the flood hazard information is specific to this  
10 property.

11 MR. CHELLIS: Your Honor, we move to admit  
12 DX815.

13 MR. VUJASINOVIC: No objection.

14 THE COURT: Admitted.

15 (Whereupon, Defendants' Exhibit 815 was  
16 admitted into evidence.)

17 BY MR. CHELLIS:

18 Q. What does DX815 tell us about the flood  
19 hazard at the time the Stewart property was acquired?

20 A. This map shows that, at the time of  
21 acquisition, the Stewart property was in the C zone.

22 Q. And what does DX815 tell us about the more  
23 current flood hazard for the Stewart property?

24 A. On the current effective FIRM, the Stewart  
25 property is shown be to be within the X unshaded zone.

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1 Q. Turning to DX817. What is the property shown  
2 on DX817?

3 A. This is for the West Houston Airport  
4 Corporation property.

5 Q. And how did the preparation of DX817 compare  
6 to the preparation of the Micu map book?

7 A. It was prepared with the same process;  
8 however in this case, the date of acquisition predated  
9 any effective FIRM for this area. And so, for the  
10 first map in this book, we used the first FIRM to be  
11 published in the area. So that's the FIRM that was  
12 closest in date to the date of acquisition.

13 MR. CHELLIS: Your Honor, we move to admit  
14 DX817.

15 MR. VUJASINOVIC: Could we just know what the  
16 date was?

17 MR. CHELLIS: For the map?

18 THE COURT: Mr. Chellis, can we tell what the  
19 map date is?

20 THE WITNESS: Yes, the map date --

21 BY MR. CHELLIS:

22 Q. Mr. Nakagaki, turning to FEMA081078, can you  
23 tell the map date?

24 A. The map date is from 1976.

25 MR. VUJASINOVIC: Okay. No objection.

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1 THE COURT: Admitted.

2 (Whereupon, Defendants' Exhibit 817 was  
3 admitted into evidence.)

4 BY MR. CHELLIS:

5 Q. And what does the map dated 1976 show for the  
6 West Houston Airport?

7 A. It shows that the property was in the C zone.

8 Q. And what does DX817 tell us about the more  
9 current flood hazard for the West Houston Airport  
10 property?

11 A. On the current effective map, the West  
12 Houston Airport is shown to be within the X unshaded  
13 zone.

14 Q. And turning back to DX816. Can you tell us  
15 what property is shown on DX816?

16 A. This is for the Turney property.

17 Q. And how did the preparation of DX816 compare  
18 to the preparation of the Micu map book?

19 A. This was made using the same process;  
20 however, in this case the date of acquisition also  
21 predated the first FIRM for this community. So we used  
22 the FIRM that was in effect closest to the date of  
23 acquisition.

24 MR. CHELLIS: Your Honor, we move to admit  
25 DX816.

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1 MR. VUJASINOVIC: Could we know what the date  
2 was on the map?

3 THE COURT: I'm sorry.

4 Mr. Chellis, if we could have the date.

5 BY MR. CHELLIS:

6 Q. Mr. Nakagaki, could you identify the map date  
7 for the Turney property?

8 A. Yes. The first FIRM for this area became  
9 effective in 1981.

10 MR. CHELLIS: Your Honor, we move to admit  
11 DX816.

12 MR. VUJASINOVIC: No objection.

13 THE COURT: Admitted.

14 (Whereupon, Defendants' Exhibit 816 was  
15 admitted into evidence.)

16 BY MR. CHELLIS:

17 Q. Based on the earliest available flood map,  
18 what does DX816 tell about the flood hazard nearest to  
19 the time the Turney property was acquired?

20 A. That when this FIRM became effective, the  
21 Turney property was shown to be within the C zone.

22 Q. And what does DX816 tell us about the more  
23 current flood hazard for the Turney property?

24 A. On the current effective FIRM, the property  
25 is shown to be within the X unshaded zone.

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1 Q. And turning to DX818, what is the property  
2 shown on DX8818?

3 A. This is the Wind property.

4 Q. And how did the preparation of DX818 compare  
5 to the preparation of the Micu map book?

6 A. This was made with the same process as the  
7 Micu map book; however, this information is specific to  
8 this property.

9 MR. CHELLIS: Your Honor, we move to admit  
10 DX818.

11 MR. VUJASINOVIC: No objection.

12 THE COURT: Admitted.

13 (Whereupon, Defendants' Exhibit 818 was  
14 admitted into evidence.)

15 BY MR. CHELLIS:

16 Q. And what does DX818 tell us about the flood  
17 hazard at the time the Wind property was acquired?

18 A. At the date of acquisition, the flood  
19 insurance rate map shows the Wind property in the X  
20 unshaded zone.

21 Q. And what does DX818 tell us about the more  
22 current flood hazard for the Wind property?

23 A. The current effective FIRM, the Wind property  
24 is shown in the X unshaded zone.

25 MR. CHELLIS: Your Honor, if I could have a

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1 moment to speak with co-counsel?

2 THE COURT: Yes.

3 MR. CHELLIS: No further questions. We pass  
4 the witness.

5 THE COURT: Thank you, Mr. Chellis.

6 Mr. Vujasinovic.

7 MR. VUJASINOVIC: Yes, Your Honor.

8 CROSS-EXAMINATION

9 BY MR. VUJASINOVIC:

10 Q. Hello, Mr. Nakagaki. I'm Vuk Vujasinovic.

11 A. Hi.

12 Q. You were not deposed in this case; is that  
13 correct?

14 A. That's correct.

15 Q. All right. And FEMA only analyzes and  
16 provides risk data for natural hazards in connection  
17 with these flood maps; is that correct?

18 A. I don't understand.

19 Q. You are the program specialist in the  
20 engineering resources branch in FEMA's engineering and  
21 modeling division; is that correct?

22 A. That's correct.

23 Q. And that division is responsible for  
24 providing risk data and risk modeling of natural  
25 hazards throughout the United States; is that correct?

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1 A. That's correct.

2 Q. Okay. And so back to my question was FEMA  
3 only analyzes and provides risk data for natural  
4 hazards; is that correct?

5 A. Can you define "natural hazards"?

6 Q. Not man-made.

7 A. So that is something that's going to depend  
8 because of the -- the information that goes into the  
9 flood insurance studies is based on the available  
10 information, which in some cases may be beyond only the  
11 non-man-made disasters.

12 Q. Are you aware of any man-made disasters in  
13 the -- our country that FEMA has provided and mapped  
14 risk data for?

15 A. I'm sorry. Can you repeat the question.

16 Q. Sure thing.

17 Are you available of any man-made disasters  
18 for which your division has ever provided risk data in  
19 connection with making the maps?

20 A. Yes.

21 Q. Which one?

22 A. FEMA does have what are called flood risk  
23 products, which is additional information that's  
24 provided on a voluntary basis based on dam or levy  
25 failure information that's gathered as part of a flood

1 insurance study.

2           However, that information of the flood risk  
3 product may not be on the flood insurance rate map  
4 itself. It's additional information that's provided.

5           Q.    So the maps don't reflect risk from man-made  
6 disasters?

7           A.    That's something that's going to depend.

8           Q.    Okay. All I want to know is if any of these  
9 FEMA flood insurance maps ever depict risk associated  
10 with a man-made hazard.

11          A.    I don't have a full knowledge of the  
12 information that went into every study that FEMA has  
13 done.

14          Q.    What it sounds like, you think sometimes the  
15 maps do reflect risks from a man-made hazard. Is that  
16 correct?

17          A.    In reference to the products I was speaking  
18 to, those are not the flood insurance rate maps; those  
19 are additional maps that FEMA may provide.

20          Q.    Where do we get those, like Joe -- you know,  
21 me, somebody, anyone?

22          A.    That information is provided from FEMA and  
23 our mapping partners to the community. So in the case  
24 of an individual, they can speak with their local  
25 building department, or in some cases that may be



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1 available through our map service center website.

2 Q. So you would -- you would say the public  
3 should be aware that FEMA -- the FEMA division that  
4 makes these flood insurance maps do know about man-made  
5 hazards; correct?

6 A. Can you repeat the question.

7 MR. VUJASINOVIC: Can you please repeat it  
8 for me, ma'am.

9 (Record read by the reporter.)

10 THE WITNESS: FEMA has -- I don't know if I  
11 can speak to all of the information that FEMA has  
12 available.

13 BY MR. VUJASINOVIC:

14 Q. I'm talking about your division -- your  
15 division makes the maps; right?

16 A. That's correct.

17 Q. And you're here as the representative for the  
18 division; right?

19 A. That's correct.

20 Q. And it's -- I'm just asking. It sounds like  
21 your division know -- believes that the public ought  
22 to -- well, your division knows about man-made hazards.

23 A. Yes.

24 Q. And you have that information somewhere but  
25 not on the actual flood insurance maps; correct?

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1           A.    When that information is available to us,  
2    yes.

3           Q.    Are you aware of any man-made hazards about  
4    20 miles east of us?

5           A.    No.

6           Q.    You ever been to Houston?

7           A.    This is my first time.

8           Q.    Okay. And so do any of the maps ever -- that  
9    have ever been put out by your division disclose any  
10   risk of getting inundated by the Addicks or Barker  
11   reservoir?

12          A.    I don't know that.

13          Q.    Remember you testified earlier about you  
14   worked, I guess, in your division, and part of your job  
15   involved taking inquiries?

16          A.    That's correct.

17          Q.    Is that like a national hotline?

18          A.    The work that I do from headquarters is  
19   typically helping inquiries that come in from either  
20   media sources or Congress or the White House.

21          Q.    All right. So sophisticated sources?

22          A.    Correct.

23          Q.    That's a partially inside joke. Sorry.

24                So now, was that, like, a call center? It's  
25   not, like, just you answering the phone, is it?

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1           A.     The work that I do today is typically written  
2     correspondence that's directed to our office.

3           Q.     Okay. So lots of emails these days, letters  
4     maybe in the past; is that correct?

5           A.     Correct.

6           Q.     And I suspect most of those questions  
7     relate -- relate to how do you read the flood insurance  
8     maps?

9           A.     Many of them do, yes.

10          Q.     So what if somebody from Houston called y'all  
11     and said, "Do I live in a government reservoir?" What  
12     would you tell them?

13          A.     Before responding, I would coordinate with  
14     the FEMA Region 6 office to understand what information  
15     is available for a particular property.

16          Q.     So you'd call Region 6 and say, "Hey, does  
17     this person live in a government reservoir"?

18          A.     Well, in addition to that, it would be to ask  
19     about the location of the property on the current flood  
20     insurance rate maps and to ask for additional details  
21     about what went into those maps.

22          Q.     Now, if any of y'all look at the map, would  
23     the map be able to answer that question?

24          A.     On its own, no, the map does not speak to  
25     that.

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1 Q. So we're calling other government offices and  
2 got to go down that road; is that correct?

3 A. Correct.

4 Q. Has anybody ever called your division and  
5 asked about whether they live in a government reservoir  
6 in Houston, to your knowledge?

7 A. Not to my knowledge.

8 Q. You said the flood zone maps are -- are a  
9 product of a flood insurance study process; is that  
10 correct?

11 A. That's correct.

12 Q. And your division works with what you said  
13 are mapping partners; is that correct?

14 A. That's correct.

15 Q. Who are those mapping partners?

16 A. The mapping partners are either contractors  
17 that are directly hired by the agency or, in other  
18 cases, they can be communities or states that do the  
19 engineering themselves and then work with the regional  
20 office to make sure that they comply with the set of  
21 regulations to issue those -- information.

22 Q. Are any other branches of the federal  
23 government ever one of y'all's partners?

24 A. We can work with other agencies, such as the  
25 Army Corps of Engineers; but, typically, as far as a

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1 mapping partner, somebody that's engaged to create the  
2 FIRMs as they are, typically, that's something that is  
3 done -- that is not done by other agencies.

4 Q. Any area that's in what you've termed the  
5 unshaded zone X is outside of the 500-year floodplain;  
6 correct?

7 A. That's correct.

8 Q. And, therefore, the area is not in any  
9 identifiable floodplain; correct?

10 A. The floodplain -- the X shaded zone is a  
11 floodplain.

12 Q. I'm -- I am referring to unshaded X.

13 A. The -- the unshaded X is -- I apologize.

14 Q. It's okay.

15 A. So, yes, the -- while there's not one  
16 specific floodplain that the X shaded is -- the X  
17 unshaded zone is associated with, it is -- can also be  
18 seen as encompassing all floodplains that have a  
19 greater impact but a lower probability than the  
20 .2 percent floodplain or the 500-year flood.

21 Q. But unshaded X is -- is outside the 500-year  
22 floodplain?

23 A. The -- the .2 percent floodplain is the  
24 500-year floodplain.

25 Q. Yes. The methodology behind creating maps,

1 is that -- is it pretty reliable?

2 A. Yes.

3 Q. Will you just briefly elaborate on how  
4 reliable it is.

5 A. Certainly. So the mapping process itself is  
6 governed by what we call mapping standards and  
7 guidance. So that is current mapping and standards for  
8 creating this flood hazard information. It's based on  
9 the latest technology and has been reviewed by outside  
10 groups from FEMA, such as the Technical Mapping  
11 Advisory Council, and has been shown to be technically  
12 credible.

13 Q. And the methodology behind creating those  
14 maps does not consider or include any risk associated  
15 with potentially getting inundated by the Addicks or  
16 Barker flood pool; is that correct?

17 A. I do not know that.

18 Q. Okay.

19 Oh, last thing, West Houston Airport. This  
20 is Plaintiffs' Exhibit 2188 and 461. And what did  
21 you -- what did you testify about the -- well, isn't it  
22 true that the West Houston Airport terminal building  
23 parcel is not in the shaded X floodplain?

24 A. That's correct.

25 Q. Okay. Thanks for your time, sir.

1 MR. VUJASINOVIC: Pass the witness.

2 THE COURT: Mr. Chellis, redirect?

3 MR. CHELLIS: Just one question.

4 THE COURT: Yes.

5 REDIRECT EXAMINATION

6 BY MR. CHELLIS:

7 Q. Mr. Nakagaki, opposing counsel asked you  
8 about the various floodplains and about your experience  
9 with the call center in FEMA generally.

10 Does FEMA have a general practice concerning  
11 what it tells all homeowners about flood insurance no  
12 matter what floodplain they live in?

13 A. Yeah. As part of our -- when we get those  
14 kind of inquiries, we do always recommend that  
15 properties carry flood insurance, no matter what flood  
16 hazards zone they're in, because there's always a  
17 possibility of flooding.

18 MR. CHELLIS: No further questions.

19 THE COURT: All right. Thank you.

20 May the Court excuse Mr. Nakagaki?

21 MR. VUJASINOVIC: Yes, Your Honor.

22 MR. CHELLIS: Yes.

23 THE COURT: Thank you, Mr. Nakagaki. Thank  
24 you very much for coming and for attending and for  
25 giving testimony today.

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1 THE WITNESS: Yes.

2 THE COURT: Ms. Tardiff?

3 MS. TARDIFF: Thanks. Good afternoon, Your  
4 Honor. The United States calls Steven Fitzgerald.

5 THE COURT: Thank you.

6 Mr. Fitzgerald, if you'll stop about right  
7 there and raise your right hand to be sworn as a  
8 witness.

9 Thereupon--

10 STEVEN D. FITZGERALD,  
11 was called as a witness, and having been first duly  
12 sworn, was examined and testified as follows:

13 THE WITNESS: Yes.

14 THE COURT: Thank you. Please be seated in  
15 the witness stand. Would you kindly state your full  
16 name for the record.

17 THE WITNESS: Yes. My full name is Steven D.  
18 Fitzgerald.

19 MS. TARDIFF: Thank you, Your Honor.

20 DIRECT EXAMINATION

21 BY MS. TARDIFF:

22 Q. Good afternoon, Mr. Fitzgerald.

23 Sir, you were identified last week by  
24 Mr. Jeff Lindner as his former supervisor at Harris  
25 County Flood Control District. And, sir, did you



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1 recently retire from the flood control district?

2 A. Yes, I did, about six and a half months ago.

3 Q. Congratulations.

4 How long were you employed at Harris County  
5 Flood Control District?

6 A. It was right around 37 years.

7 Q. And what was your position at the flood  
8 control district at the time of your retirement?

9 A. It was chief engineer.

10 Q. And how long did you serve as chief engineer?

11 A. Right at 20 years.

12 Q. And, sir, are you also a registered  
13 professional engineer?

14 A. Yes.

15 Q. Have your responsibilities at Harris County  
16 Flood Control District included working with the Corps  
17 of Engineers?

18 A. Yes.

19 Q. And can you describe those responsibilities  
20 for us?

21 A. Yes. It probably began in 1989, 1990, when I  
22 became the manager of the capital improvements  
23 department. And so we had projects with the Corps of  
24 Engineers to implement, as well as other Harris County  
25 Flood Control District projects. And that's when it

1 started.

2 And there was project managers that worked  
3 for me that managed the day-to-day aspects of each of  
4 the projects, but I was involved at a little higher  
5 level to keep the projects moving.

6 Q. Okay. And, with a specific focus on the  
7 Addicks and Barker reservoirs, can you describe what  
8 your roles or responsibilities are -- or were with  
9 respect to the Corps of Engineers?

10 A. That was primarily because the Corps owns,  
11 operates, and maintains those facilities. Those are  
12 not Harris County Flood Control District facilities.  
13 More of coordination and communication about the  
14 reservoirs, what's happening physically, you know, what  
15 kind of work they were doing with them, and then also,  
16 before, during, and after events, potential rainfall  
17 and flood events.

18 And I was one of the people that coordinated  
19 with them and eventually became the primary person that  
20 coordinated with them.

21 Q. And can you give us an estimate of how  
22 many -- how many years during your tenure at the flood  
23 control district that you served in a coordination role  
24 with the Corps related to Addicks and Barker?

25 A. I don't remember specifically because I think

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1 it evolved over time.

2 Q. Sure.

3 A. But I would say probably sometime in the  
4 early 1990s, it began.

5 Q. Okay. We heard last week that Harris County  
6 Flood Control District was created around 1937; is that  
7 correct?

8 A. Yes.

9 Q. Okay. And can you -- let me step back.  
10 I'm going to circle back and actually use a  
11 document that's already been admitted. We're going to  
12 turn to Defendants' Exhibit 737. And we'll get a copy  
13 of that in front of you, sir.

14 And, Mr. Fitzgerald, are you familiar with  
15 this document?

16 A. Yes.

17 Q. And is this a document that you worked on  
18 preparing?

19 A. Yes.

20 Q. And how many years has Harris County Flood  
21 Control District been preparing federal briefings such  
22 as the one in front of you?

23 A. This was our 20th year. The books -- the  
24 information evolved over time. So, in the beginning,  
25 they were shorter than this.

1 Q. And is this a public report?

2 A. Yes.

3 Q. And was the Addicks and Barker project the  
4 first project that Harris County Flood Control District  
5 was involved with the Corps on?

6 A. Yes. When the district was created in 1937,  
7 one of the main reasons was to be a local interest over  
8 the Addicks and Barker reservoirs.

9 Q. And, today, does the flood control district  
10 still serve as a local interest -- or is -- if there's  
11 another word for it, you can tell us that -- on Corps  
12 projects?

13 A. For Corps projects in general, we're the  
14 nonfederal sponsor -- sometimes you'll hear the term  
15 "local sponsor" -- for other projects in Harris County.

16 But, for Addicks and Barker, that was very  
17 early on in the 1930s and '40s. Laws were different  
18 then. More laws have passed since then that got more  
19 into what a local sponsor does. So, on the other  
20 projects, we are the local sponsor. This one, I never  
21 really considered us as a local sponsor as today -- in  
22 today's terms.

23 Q. And, in today's terms, what does it mean to  
24 be a local sponsor or nonfederal sponsor for a project  
25 with the Corps?

1           A.     Before the Corps can work on a project in a  
2     community, there has to be a local sponsor that agrees  
3     to cost-share in the project, a minimum amount of money  
4     and then a maximum amount. And they have to agree to  
5     do certain aspects of the project, like buying the  
6     right-of-way, altering bridges. And then also, when  
7     the project is finished, to do the operation and  
8     maintenance on that particular project.

9           Q.     Okay. And we'll circle back to some other  
10    projects that the flood control district is involved  
11    in, but first I'm going to have you turn in Defendants'  
12    Exhibit 737, the federal briefing paper from -- or  
13    report from 2018, to the page that is Bates-stamped  
14    FEMA78351.

15                   And do you have that in front of you,  
16    Mr. Fitzgerald?

17           A.     Yes.

18           Q.     The caption of this page is "Vision, Mission,  
19    Value, and Goals."

20                   And, sir, did you have -- were you involved  
21    in crafting these statements?

22           A.     Yes.

23           Q.     And there are several statements here that  
24    speak in terms of flood risk and flood -- or excuse  
25    me -- that speak in terms of reducing flood risk and

1 flood damages. Is that a fair characterization?

2 A. Yes.

3 Q. Okay. And, sir, is it possible to eliminate  
4 flood risks and flood damages in Harris County?

5 A. No, not completely, because the terrain is  
6 relatively flat and our rainfall, particularly along  
7 the Gulf Coast, is very intense and can overwhelm the  
8 drainage systems pretty easily.

9 Q. And focusing on the goals on this page -- and  
10 I'll paraphrase here -- but one of the listed goals is  
11 "to reduce flood impacts by planning and implementing  
12 flood risk reduction programs such as flood  
13 preparedness education."

14 There's also a reference here to flood  
15 warning. And so my question, Mr. Fitzgerald, is what  
16 are the general messages about flood risk and flood  
17 preparedness that Harris County Flood Control District  
18 seeks to communicate to the public?

19 A. Off the top of my head -- there's several of  
20 them. I won't remember all of them.

21 But it's primarily for the public to be --  
22 pay attention to the weather and -- especially when the  
23 forecast -- or forecasting heavy rains and possible  
24 flooding. Have a plan, family plan when that happens.  
25 In case the families get separated or something happens

1 at their home, school, or business, know what you would  
2 do.

3 Also to monitor or have -- look at the flood  
4 warning system that the Harris County Flood Control  
5 District has on their website. Pay attention to that.

6 And also, many, many years ago, we advised  
7 all citizens and all publications we did to buy flood  
8 insurance because we believe every home is susceptible  
9 to flooding in Harris County. And you need to get  
10 flood insurance as well.

11 Q. And so are -- those public messages that the  
12 flood control district has tried to put out, are those  
13 limited to areas that have experienced flooding before?

14 A. No. Those are for the general public.

15 Q. And, sir, based on your several decades at  
16 Harris County Flood Control District, do you consider  
17 flood risk reduction to be a shared responsibility?

18 A. Yes. That's a term I learned going to  
19 different conferences around the country. In the last  
20 two decades, I think, it became a term.

21 And it means that there's no one entity or  
22 person or organization that can do a lot by themselves  
23 to help reduce flood risk. It's shared between the  
24 citizens, what they can do at their house, you know,  
25 school, business, family before, during, and after a

1 flood. Then, at the local county, state, and federal  
2 level, we each have different roles. And if we work  
3 together, we can do more to reduce flood risk in the  
4 communities across Harris County and in the United  
5 States.

6 Q. Very good. We're going to stick with  
7 Defendants' Exhibit 737, the federal briefing report  
8 for 2018. And I'm going to ask you to turn to the next  
9 page, which is FEMA78352.

10 There's some background information here.  
11 And, Mr. Fitzgerald, I'm going to direct your attention  
12 to the third bullet point there. The first sentence  
13 reads "The district's income is derived primarily from  
14 a dedicated ad valorem property tax."

15 And, sir, can you explain what that means?

16 A. I'm not a financial expert or person on this,  
17 but I am a taxpayer in Harris County. So it means that  
18 our -- we pay a tax rate -- it says here 2.831 cents  
19 last year -- per hundred valuation of our property as a  
20 tax annually.

21 Q. And does every property owner in Harris  
22 County have that responsibility?

23 A. As far as I know, they do.

24 Q. And when you receive your annual property tax  
25 bill from Harris County, is there a line item for the



1 tax assessed specifically for Harris County Flood  
2 Control District?

3 A. Yes. It's under the Harris County tax.  
4 There's several sources of that tax. It's rolled up.  
5 So taxpayers write a check to Harris County, and it  
6 tells you the source of each one of those taxes.

7 Q. Okay. I'm going to have you turn to the next  
8 page, which is a fact sheet. And it's FEMA78353.

9 And, Mr. Fitzgerald, I want to start by  
10 asking you about the drainage infrastructure in -- or  
11 the Harris County Flood Control District manages within  
12 the county.

13 And can you begin by describing the channels  
14 that Harris County Flood Control District is  
15 responsible for?

16 A. Yes. The channels -- we say there are open  
17 channels in Harris County because we do not have  
18 jurisdiction over the roadside ditches, storm sewers,  
19 those local drainage systems, but they outfall into the  
20 Harris County Flood Control District channels -- open  
21 channels.

22 Q. And how many open channels is Harris County  
23 responsible for -- or the flood control district?  
24 Excuse me.

25 A. By the way flood control district's numbering

1 system is, there's 1500 channels. And there's about  
2 2500 miles in length if we add them all together.

3 Q. So we've heard -- and I'll try to make sure I  
4 get the ones in Harris County correct. But, for  
5 example, above Addicks, we've heard about Langham Creek  
6 this week. Is that considered an open channel?

7 A. Yes.

8 Q. Okay. And Buffalo Bayou?

9 A. Yes.

10 Q. And then would any tributaries that flow into  
11 those larger creeks or channels also be part of that  
12 network?

13 A. Yes.

14 Q. Is Harris County Flood Control District also  
15 responsible for detention basins?

16 A. Yes. The ones that Harris County Flood  
17 Control District builds as part of a flood control  
18 project or a federally partnered project and then also  
19 ones that land developers build to drain public roads  
20 that they build. As long they meet flood control  
21 district criteria, then we would maintain those as  
22 well.

23 Q. Okay. And I should probably --

24 A. I said "we."

25 My heart is still with Harris County Flood

1 Control District, Judge, so I may say "we" every once  
2 in a while.

3 Q. And let me step back there and ask you, what  
4 is a detention basin?

5 A. It's a place where the stormwater runoff  
6 could be stored temporarily until the water starts  
7 going down in the receiving channel downstream. But  
8 the ones in Harris County that Harris County Flood  
9 Control maintains are all gravity; they all drain by  
10 gravity. So ...

11 Q. And is there a distinction between detention  
12 basins that Harris County Flood Control District  
13 maintains and those that they do not?

14 So let me ask you a follow-up question there.

15 About how many detention basins does the  
16 flood control district maintain and have responsibility  
17 for?

18 A. It's about 200, probably a little more than a  
19 year ago because more have been constructed.

20 Q. And do those vary in size?

21 A. Yes. There's small ones, probably 1 or  
22 2 acres, and then all the way up -- what did we say? --  
23 oh, 14 acres.

24 Q. And is the 14-acre one, is that a regional  
25 detention basin?

1 A. Yes, that is.

2 Q. And what does that mean?

3 A. Regional means it's on a main channel, and it  
4 works in coordination with other regional detention  
5 basins on that channel system. And usually some  
6 channel improvement -- channel contains improvement  
7 projects on that channel.

8 Q. Okay. And you mentioned that there are other  
9 detention basins within the county that you don't have  
10 responsibility for -- that Harris County Flood Control  
11 District does not have responsibility for.

12 Do you have a sense as to how many of those  
13 type of detention basins there are in the county?

14 A. I don't know. I usually just say about --  
15 probably at least a thousand or so. Because there's a  
16 lot of private detention basins, you know, at Walmarts.  
17 And there may be a subdivision or a large development  
18 that wants to maintain one themselves that they decide  
19 to do.

20 Q. And, sir, are Addicks and Barker reservoirs  
21 large detention basins?

22 A. Yes. They were the first detention basins in  
23 Harris County.

24 Q. Are they the largest in the county?

25 A. And the largest. Yes, still the largest.

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1 Q. Okay. Mr. Fitzgerald, I want to switch gears  
2 a little bit and walk through some rainfall events and  
3 a few documents. And I'll try to do it in  
4 chronological order to make it easier for all of us.

5 And I want to start by bringing you back to  
6 late 1991, early 1992, that time period.

7 Do you recall the rainfall or rainfall events  
8 during that period of time?

9 A. In general, I do.

10 Q. Can you describe to us what you recall.

11 A. Sure.

12 Somewhere around Thanksgiving 1991, that time  
13 period where we had pretty good rainfall, not to cause  
14 any house flooding in Harris County, but then it  
15 continued to rain off and on through March. There  
16 wasn't hardly a week that went by where it didn't rain.  
17 And then, in March -- I believe it was Palm Sunday in  
18 March -- we had a pretty good rainfall that was greater  
19 than 4 to 6 inches, which usually causes -- can cause  
20 house flooding in certain watersheds.

21 Q. And focusing on the Addicks and Barker  
22 reservoirs in particular, do you have a recollection as  
23 to how those storms affected the reservoirs and the  
24 reservoir pools at that time?

25 A. Yes, because the operation --

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1 THE COURT: Sorry?

2 MR. DUNBAR: Larry Dunbar for the plaintiffs.

3 THE COURT: Yes, Mr. Dunbar.

4 MR. DUNBAR: I just wanted to make it clear,  
5 Your Honor, that this is a fact witness and not an  
6 expert witness, because we know Mr. Fitzgerald in the  
7 past has been retained by the DOJ as an expert witness.

8 So I just wanted to make sure that it's clear  
9 that this witness is being presented as a fact witness.

10 MS. TARDIFF: He is here as a fact witness  
11 under subpoena. He was subpoenaed by both parties,  
12 Your Honor.

13 THE COURT: Thank you.

14 MR. DUNBAR: Thank you, Your Honor.

15 BY MS. TARDIFF:

16 Q. So let me step back because I'm not sure we  
17 got past the question.

18 But what is your recollection as to how the  
19 storms you described over the winter of '91 into early  
20 1992 -- March of 1992, I think you said -- how those  
21 affected the Addicks and Barker reservoirs and the  
22 reservoir pools?

23 A. You know, when that happened, the operation  
24 plan the Corps has is that, if there's a threat of  
25 rain, the gates are closed and -- so that, you know,

1 the local runoff from downstream on Buffalo would not  
2 be combined with what's coming out of the reservoirs.

3 And, during that time period, they had a  
4 difficult time opening -- having chances to open  
5 that -- those gates because of all the rain and  
6 forecasted rain during that time period. Then, in  
7 March of '92, there was that large rain. I don't  
8 remember how large it was, but it was enough to really  
9 start running -- or water to run off into the  
10 reservoirs and the levels starting to rise.

11 And so that's what happened. And that was --  
12 at that time, March of '92 flood created a record level  
13 in Addicks and Barker reservoirs.

14 Q. And did those record pool levels affect roads  
15 in the area?

16 A. The one that I recall is State Highway 6 that  
17 runs through Addicks Reservoir. It was closed for some  
18 time. I don't remember how long. But that western  
19 part of -- northwestern part of Harris County uses  
20 State highway 6 a lot. So it really disrupted traffic  
21 in that area.

22 Q. And that's a heavily traveled road, then?

23 A. It's very heavily traveled. And so it was --  
24 it was a pretty good wake-up call at that time.

25 Q. And so you say it was a pretty good wake-up

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1 call. Can you -- can you describe what those storms  
2 and then the record pool levels, the closure of that  
3 road for a period of time, what that told you in your  
4 position at Harris County Flood Control District at the  
5 time about flood risks related to Addicks and Barker  
6 reservoirs for properties upstream of those reservoirs?

7 A. I think -- because, you know, it was a record  
8 level, Highway 6 was closed, had a lot of attention in  
9 the community. So the community became aware that they  
10 were there, because most people didn't pay attention to  
11 them. And so it was a good wake-up call.

12 And then, also, for the Corps and Harris  
13 County Flood Control and others in the area to realize  
14 that the reservoirs could fill not just from a single  
15 large event but from a series of smaller events over  
16 time.

17 So that was what we learned during that  
18 event.

19 Q. Let's turn to some documents in the reports  
20 moving past March of 1992. I'm going to have you turn  
21 first to Joint Exhibit 54.

22 And, Mr. Fitzgerald, are you familiar with  
23 this document?

24 A. Yes.

25 Q. Can you identify it for us?



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1 A. Yes. It's the Katy Freeway Corridor Flood

2 Control Study dated May 1996.

3 Q. And was this prepared by Harris County Flood

4 Control District's planning department?

5 A. Yes.

6 MS. TARDIFF: Your Honor, we move to admit

7 Joint Exhibit 54.

8 MR. DUNBAR: No objection, Your Honor.

9 THE COURT: Mr. Dunbar.

10 What is the date of the document?

11 THE WITNESS: May 1996.

12 THE COURT: Is that when it was prepared?

13 THE WITNESS: Yes. That's when it was

14 published -- not published, but that's when it was

15 finalized. Probably took a few months to prepare it.

16 THE COURT: All right. Admitted.

17 (Whereupon, Joint Exhibit 54 was

18 admitted into evidence.)

19 BY MS. TARDIFF:

20 Q. And, Mr. Fitzgerald, just generally, do you

21 recall generally what this particular study was about?

22 A. Yes. The Texas Department of Transportation

23 was beginning the planning or maybe the preliminary

24 engineering for the Katy Freeway expansion, and so they

25 had consultants and their own staff look into drainage

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1 along the Katy Freeway corridor. And they were coming  
2 to the flood control office to coordinate that with us.

3 THE COURT: Ms. Tardiff, may I ask a quick  
4 question?

5 MS. TARDIFF: Yes, sir.

6 THE COURT: What the Katy Freeway?

7 THE WITNESS: Okay. It's Interstate 10.

8 MS. TARDIFF: Would you like us to pull up a  
9 map, sir, just to orient it?

10 THE COURT: No, no. We don't need that. I  
11 just had to smile. Katy comes from a  
12 Missouri-Kansas-Texas Railway, eventually, and there's  
13 an interesting Blues Brothers song about "I caught the  
14 Katy," but we don't need to go there.

15 MS. TARDIFF: I promise I won't start  
16 singing.

17 THE WITNESS: Yeah. Each community has their  
18 own names for their freeways. So hard to keep up.

19 BY MS. TARDIFF:

20 Q. Okay. I'm going to have you turn, then, to  
21 page 2 of this report. And looking at about the middle  
22 of the page under the heading "Problem Statement," can  
23 you read that first statement in the record for us,  
24 Mr. Fitzgerald.

25 A. "The primary flood threat facing the citizens

1 of West Harris County and West Houston comes from the  
2 inability to drain the Addicks and Barker reservoirs in  
3 an efficient manner. The maximum flood pool levels of  
4 the Addicks and Barker reservoirs extend far beyond the  
5 limits of the government-owned land. There are  
6 currently 6,000 structures and more than 8,000 acres  
7 within the reservoir fringe areas between the limits of  
8 the government-owned land and the extent of the Addicks  
9 and Barker maximum flood pools. While 6,000 is a large  
10 number, projected growth rates for West Harris County  
11 could easily increase the number of structures in the  
12 fringe to 25,000 or more. Delineations of the Addicks  
13 Reservoir and Barker Reservoir fringe areas are shown  
14 in Appendix A."

15 Q. And, Mr. Fitzgerald, does that statement  
16 accurately reflect Harris County Flood Control  
17 District's understanding at this time of the flood risk  
18 for properties and homes located in what is described  
19 in this report as the fringe area upstream of the  
20 government-owned land?

21 A. Yes.

22 Q. All right. Let's take a look at one more  
23 report. I'm going to have you turn to Joint  
24 Exhibit 60.

25 Do you have that in front of you?

1 A. Yes.

2 Q. Okay. Is this a report that was prepared  
3 by -- or for, at least, Harris County Flood Control  
4 District?

5 A. Yes.

6 Q. And who prepared this report?

7 A. Costello Incorporated.

8 Q. Can you identify what the report is and the  
9 date for us.

10 A. It's a feasibility study for improvements to  
11 Addicks and Barker reservoirs, dated March of 2000.

12 Q. And is Costello a professional engineering  
13 firm here in the area?

14 A. Yes, civil engineering firm.

15 MS. TARDIFF: We move to admit Joint  
16 Exhibit 60.

17 MR. DUNBAR: No objection, Your Honor.

18 THE COURT: Admitted.

19 (Whereupon, Joint Exhibit 60 was  
20 admitted into evidence.)

21 BY MS. TARDIFF:

22 Q. I'm going to have you turn to the first page  
23 of the report, following the table of contents. It is  
24 page 1 of the report.

25 And are you there, Mr. Fitzgerald?

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1           A.     Yes.

2           Q.     I'm going to direct your attention to the  
3     bottom of that page under Section C, which is "Problem  
4     Statement."

5                     And can you -- I'm going to again ask you to  
6     read that paragraph for us, sir.

7           A.     "The potential of flooding upstream of the  
8     dams and within the fringe areas has been a growing  
9     concern due to the continuing development within these  
10    areas. During the winter of 1991 and spring of 1992,  
11    the reservoirs reached the highest recorded flood  
12    elevations. Disruptions to the transportation systems  
13    within the reservoirs occurred and lasted for several  
14    weeks, with the reservoirs taking several months to  
15    drain to nonthreatening levels. These occurrences have  
16    prompted the concerns of the residents, business  
17    owners, and government representatives to be expressed  
18    regarding the level of protection that the reservoirs  
19    provide to the property upstream of the dams."

20          Q.     And, Mr. Fitzgerald, is that description of  
21    the problem in this report consistent with your  
22    recollection that the storms during the winter of 1991  
23    extending into the spring of 1992 brought renewed  
24    attention to the flood risk for properties upstream of  
25    the reservoirs in what is referred to here again in

1 this report as the fringe area?

2 A. Yes.

3 Q. All right. I want to switch gears one more  
4 time and turn next to the Addicks and Barker Emergency  
5 Coordination Team, which has also been referred to here  
6 over the last week or so by the acronym ABECT,  
7 A-B-E-C-T.

8 And, Mr. Fitzgerald, are you familiar with  
9 the ABECT group?

10 A. Yes.

11 Q. And how are you familiar with that group?

12 A. I've been on it since its inception in about  
13 2007.

14 Q. And is Harris County Flood Control District a  
15 member of the ABECT group?

16 A. Yes.

17 Q. And can you remind us who some of the other  
18 participants in that group are?

19 A. I'll probably leave someone out, but I'll  
20 try.

21 Harris County Flood Control District, Corps  
22 of Engineers, Harris County, Fort Bend County, City of  
23 Houston, the Texas Department of Emergency Management,  
24 USGS, National Weather Service. That's all I can  
25 remember right now. I think that's about it.

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1 Q. And, as a participant in the ABECT group, how  
2 would you describe the purpose of that group?

3 A. The purpose is to prepare for an event that  
4 may happen related to Addicks and Barker reservoirs  
5 together as a team and to improve our communications,  
6 our coordination, decision-making so that we can  
7 ultimately get information to the public and  
8 decision-makers during -- before, during, and after an  
9 event to help reduce the consequences of the flood.

10 Q. Very good. I'm going to have us turn next to  
11 Joint Exhibit 88.

12 A. I'm learning the system here.

13 Q. And, Mr. Fitzgerald, are you a recipient of  
14 this email?

15 A. Yes.

16 Q. And can you tell us the -- the date and  
17 subject of that email?

18 A. The date is February 1, 2008. Subject is  
19 "Addicks and Barker Emergency Response Plan, next  
20 exercise planning meeting."

21 MS. TARDIFF: Your Honor, we move to admit  
22 Joint Exhibit 88.

23 MR. DUNBAR: No objection, Your Honor.

24 THE COURT: Admitted.

25 (Whereupon, Joint Exhibit 88 was

1 admitted into evidence.)

2 BY MS. TARDIFF:

3 Q. Mr. Fitzgerald, I'm going to try and work  
4 with the attachments that are on this exhibit since  
5 this was used at your deposition. I'm going to have  
6 you turn to the third page of the attachment. The  
7 Bates number at the bottom is DEPO50780.

8 Are you on that page, sir?

9 A. Yes.

10 Q. And you might be able to bring it up as well.

11 And, Mr. Fitzgerald, based on your  
12 deposition, my recollection is this is a part of -- a  
13 portion of a spreadsheet that was attached to this, but  
14 can you identify for us what -- what this is?

15 A. Yes. This was a very early versions of our  
16 response plan that we developed as a group, action  
17 response plan. Because during an event, we wanted to  
18 have an understanding before the event what each one of  
19 the jurisdiction's response or responsibility or action  
20 may be so that we could coordinate more efficiently.

21 Q. And so can you describe for us, based on the  
22 page that you're on, what the columns are in this  
23 portion of this sheet and what information was shared  
24 with any ABECT group. And let me back up.

25 The portion of this spreadsheet we're looking



1 at relates to Addicks Reservoir on 5780; is that  
2 correct?

3 A. Yes.

4 Q. Okay. Can you walk us through kind of the  
5 pool elevation consequence and explain what the third  
6 column here is.

7 A. Okay. Now, the concept came up with those of  
8 us who worked floods before, because it's all done on  
9 elevation and rising and falling levels in a community  
10 from detention basin or a channel. So the elevations  
11 changes are important to knowing what's happening in  
12 the community.

13 And so we decided to prepare this based on  
14 elevations as the water rose to know what the  
15 consequence would be as it reached some key elevations,  
16 physical -- physical locations in and around the  
17 reservoirs. And then -- so we had to describe the  
18 consequence there and then the name and condition.

19 Name is -- the Corps of Engineers has certain  
20 names for certain levels. Like "extended watch" is one  
21 and some other names. So we put those in there and  
22 then a little more detail about the condition of the  
23 consequence. Some of them needed a little more  
24 information. So we put in a column.

25 Q. And --

1           A.     Then that's another column that's not on this  
2     page.  It should be.  It's the next one.  I'm not sure  
3     where it is, but ...

4           Q.     Is the fourth column -- what is the  
5     additional column that you recall was on the  
6     spreadsheet that was prepared?

7           A.     Well, this early one had the entities' action  
8     and response at that level, what they normally do at  
9     that level or what would they plan to do at that level.  
10                Like I said, this is an early one.  It  
11     evolved into something -- the same type of columns, but  
12     there were some refinements made.

13          Q.     Okay.  And sticking with the portion of the  
14     spreadsheet we see here for Addicks, did this early  
15     spreadsheet provide members of the ABECT group a pool  
16     elevation for the approximate first street flooded from  
17     a rising pool for Bear Creek Village?

18          A.     Yes.

19          Q.     And what was that elevation?

20          A.     On this early one, which is at a different  
21     datum than the current one we use, it says 104.2.

22          Q.     And in this early spreadsheet, did -- was  
23     ABECT also given an approximate pool elevation when the  
24     first home floods from the pool and again at Addicks?

25          A.     It's 106.6.

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1 Q. And is there a similar spreadsheet for Barker  
2 Reservoir attached to this email?

3 A. Yes.

4 THE COURT: Ms. Tardiff, before we leave  
5 this, may I ask a really quick question about the same  
6 page?

7 MS. TARDIFF: Yes, of course.

8 THE COURT: Mr. Fitzgerald, do you see 99.7  
9 elevation of the pool, and it says, "Pool covers all  
10 lanes of State Highway 6"?

11 THE WITNESS: Yes, sir.

12 THE COURT: Has that actually happened?

13 THE WITNESS: Yes. A few times.

14 THE COURT: Sorry?

15 THE WITNESS: Just a few times. Even --  
16 above it says 98.9 pool on the shoulder. TxDOT will  
17 close the highway when it's on the shoulder because  
18 it's unsafe. So that's the -- that's the point when  
19 TxDOT will close the highway.

20 THE COURT: So, really, the first evident  
21 thing that happens is Highway 6 gets closed; is that  
22 right?

23 THE WITNESS: Yes. And there's -- later  
24 versions of this, there's some other roads internal to  
25 Addicks that are public that we added on here, but

1 they're less traveled. But this was the most important  
2 one.

3 THE COURT: Thank you.

4 BY MS. TARDIFF:

5 Q. So, and on that point, in a situation where  
6 here the Addicks Reservoir pool is -- is rising to the  
7 extent that it starts to impact State Highway 6, how  
8 does that impact landowners upstream of Addicks  
9 Reservoir?

10 A. Their ability to get to work and school is  
11 impacted.

12 Q. So they're having to seek alternate routes  
13 that don't allow them to drive through the reservoir at  
14 that point?

15 A. That's correct.

16 Q. And if State Highway 6 is impacted by a  
17 rising pool, is that well publicized in the area?

18 A. Yes. And I think the community probably  
19 knows as quick as anyone else because someone can't --  
20 highway's closed. Usually we know about it but not  
21 always in the past. Since ABECT, it got better, you  
22 know, with better communication. But the community  
23 member could find out. They couldn't drive down the  
24 street.

25 Q. I'm going to have you turn now to Defendants'

1 Exhibit 194.

2 And, Mr. Fitzgerald, I'll give you a chance  
3 to take a look at this, but my first question is are  
4 you familiar with this document? Or have you seen it  
5 before?

6 A. Yes, probably. I've probably seen it before.

7 Q. Can you tell us what it is?

8 A. It's the Addicks and Barker Multiagency  
9 Emergency Coordination Team meeting. Looks like an  
10 agenda. And then there's an attachment, which was that  
11 action response --

12 Q. And --

13 A. -- spreadsheet that we talked about  
14 previously.

15 Q. What's the date?

16 A. This is a newer version of it.

17 Q. Very good. What is the date on this  
18 document?

19 A. Friday, March the 13th.

20 Q. And is --

21 A. 2009.

22 Q. Okay. Thank you. And is the Addicks and  
23 Barker Multiagency Emergency Coordination Team, is that  
24 the same thing as the ABECT?

25 A. Yes.

1 Q. Okay.

2 A. Took us a while to figure out a good federal  
3 acronym to use for this.

4 MS. TARDIFF: Your Honor, we would move to  
5 admit Defendants' 194?

6 MR. DUNBAR: Your Honor, we object. I don't  
7 think this -- I don't believe this witness has  
8 identified that he actually did recognize this  
9 document. So we're going to object to.

10 THE COURT: That objection stands at the  
11 moment.

12 Ms. Tardiff, we need a little more  
13 foundation.

14 MS. TARDIFF: Okay.

15 BY MS. TARDIFF:

16 Q. Mr. Fitzgerald, did you routinely participate  
17 in ABECT team meetings?

18 A. Yes.

19 Q. And is it common to have an agenda such as  
20 you see here on the first page?

21 A. Most of the time.

22 Q. And is the attachment to that agenda a  
23 spreadsheet that is familiar to you?

24 A. Yes.

25 MS. TARDIFF: Your Honor, we still move to

1 admit DX194.

2 THE COURT: You ought to find out when  
3 Mr. Fitzgerald became familiar with it and whether he  
4 actually attended the meeting.

5 BY MS. TARDIFF:

6 Q. Do you recall whether you attended this  
7 meeting back in March of 2009?

8 A. We had a meeting -- many meetings, and we had  
9 lots of versions of this spreadsheet as it was  
10 developing. So I probably -- not -- I'm 99 percent  
11 sure I saw every version because I was very much  
12 involved in developing these.

13 Q. And so you were -- you were involved in the  
14 development of the spreadsheet --

15 A. Very much.

16 Q. -- one version of which is attached to this?

17 A. That's the way I would look at it.

18 THE COURT: Mr. Dunbar.

19 MR. DUNBAR: First, Your Honor, he can't say  
20 he actually attended this meeting, so he doesn't know  
21 if this actually -- agenda actually was for a meeting  
22 he attended. I don't have a problem with introducing  
23 the spreadsheet if he can state that he actually saw  
24 this particular version of the spreadsheet. I'm fine  
25 with that.

1 THE COURT: Ms. Tardiff, I am tempted to  
2 admit it, but let's have a little more foundation.

3 MS. TARDIFF: We'll try, Your Honor.

4 BY MS. TARDIFF:

5 Q. Again, Mr. Fitzgerald, you said there were a  
6 number of iterations of this spreadsheet over time?

7 A. Yes, ma'am.

8 Q. And was that part of ABECT's efforts to put  
9 together a spreadsheet that would be useful to those  
10 team members in the event of a situation where you had  
11 a rising pool?

12 A. Yes.

13 Q. And do you recognize this spreadsheet as one  
14 of those iterations over time?

15 A. Yes.

16 MR. DUNBAR: No problem, Your Honor.

17 THE COURT: All right. Admitted.

18 (Whereupon, Defendants' Exhibit 194 was  
19 admitted into evidence.)

20 BY MS. TARDIFF:

21 Q. So, Mr. Fitzgerald, this version of the  
22 spreadsheet might be a little easier for us to read.  
23 I'm going to have you turn to the first page after the  
24 cover sheet, and we'll look at the table at the top,  
25 which is identified as "Addicks Reservoir."



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1 And can we blow up just that first part of  
2 the table? Actually, the full top part. Sorry.

3 Mr. Fitzgerald, when we were -- when we were  
4 looking at the last exhibit where the spreadsheet was  
5 kind of broken up, you were talking about an additional  
6 column.

7 Does this version of the spreadsheet have  
8 that additional column?

9 A. Yes.

10 Q. And can you describe what that column is and  
11 what the purpose of it -- of that column was in  
12 connection with the ABECT group?

13 A. Yes. That was the column for the agencies to  
14 include what action and response that they would take  
15 each one of those corresponding pool elevations.

16 Q. And did each of the members of the -- of the  
17 ABECT group kind of go through the process of  
18 identifying what their response would be to one of  
19 your -- one of the key pool levels that was identified  
20 here?

21 A. Yes.

22 Q. Okay. The page we are on, the action  
23 response column is captioned "USACE." Is that right?

24 A. Yes.

25 Q. And let's look down at the one at the pool

1 level 104.2 feet on this version of the spreadsheet.

2 The consequence is approximate first street  
3 flooded from pool, Bear Creek Village.

4 What is the -- the stated action at this  
5 point for the Corps of Engineers in response to that  
6 key pool level?

7 A. To notify HCFCD; HC, which is Harris County;  
8 HOUU, which is City of Houston there could be possible  
9 street flooding off GOL, which is government-owned  
10 land, from reservoir pool, provide reservoir pool  
11 projections.

12 Q. Let's move forward a little further in this  
13 document. We'll stay with Addicks. We're going to  
14 move forward to the page which is Bates-stamped  
15 USACE727392.

16 THE COURT: Ms. Tardiff, may I ask a quick  
17 question?

18 MS. TARDIFF: Yes, sir.

19 THE COURT: It has to do with the pool level  
20 111, flow around north end of dam.

21 Do you know what that means Mr. Fitzgerald?

22 THE WITNESS: Okay. Yeah. That's on -- back  
23 on Addicks. Okay.

24 Yes. That means that the water level's gone  
25 to the point high enough to start flowing around the

1 end of Addicks Reservoir dam onto the north side.

2 THE COURT: Let's take the next entry. Pool  
3 level 116, flow over spillways. What does that mean?

4 THE WITNESS: That's the Corps' elevation  
5 where they say flow is going over the spillways.

6 THE COURT: Where are these spillways  
7 located, to your knowledge?

8 THE WITNESS: There's two on Addicks  
9 Reservoir, one on the north end at the end of the dam  
10 and then one along the south side of the dam from the  
11 end of the dam, you know, toward the middle of the dam.

12 THE COURT: So you're saying there's a flow  
13 around the north end of the dam well before the flow  
14 over the spillway?

15 THE WITNESS: Yes.

16 THE COURT: Why?

17 THE WITNESS: Because the spillway -- the dam  
18 itself ends at the dam or a little higher than the  
19 natural ground on the ends.

20 THE COURT: Are you aware of subsidence in  
21 that area?

22 THE WITNESS: Yes, sir.

23 THE COURT: Are these elevations accurate?

24 THE WITNESS: This is an early version. So  
25 these elevations, I recommend not using based upon more

2420

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1 recent information. So this is 2009.

2 THE COURT: Thank you.

3 BY MS. TARDIFF:

4 Q. So this -- this table dated back to 2009, is  
5 that based on elevation datum at that time?

6 A. Yes. The Corps used 1973, but we later used  
7 the -- the current elevation that we use in Harris  
8 County. I don't know exactly when that was, but this  
9 was during the development stage.

10 Q. Sure. And --

11 A. Early development stage.

12 Q. So, over time, this spreadsheet was updated  
13 and -- and new -- as new information was available,  
14 that was encompassed in -- or included in updated  
15 spreadsheets?

16 A. Yes. And the ABECT team decided to break  
17 things down a little more for Addicks and get a little  
18 more granular. So it evolved over time. And even  
19 after we got it to a point to start working with it,  
20 like any good piece of information that you need, if  
21 you found ways to improve it any more, refinements,  
22 then those could have been done to it as well.

23 Q. And does -- do the members of the ABECT group  
24 still use an updated form of this general spreadsheet  
25 to assist during emergency events where you have flood

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1 pool that may exceed government-owned lands?

2 A. Yes.

3 Q. Let's jump ahead now, then, to the page I had  
4 referenced. It's Bates USACE727392. And let's stay  
5 with an Addicks chart for now.

6 Are you on that page, Mr. Fitzgerald?

7 A. Yes.

8 Q. And is this particular page in the 2009  
9 version of the spreadsheet related to Harris County  
10 Flood Control District's action and response to the  
11 stated pool levels?

12 A. Yes.

13 Q. And, looking down the pool elevations, I'm  
14 going to direct your attention to 104.2 feet. And on  
15 this table, at least, this version of the table, that  
16 there are two consequences associated with that  
17 elevation on this chart; is that correct?

18 A. Yes.

19 Q. And what are those two consequences?

20 A. The first one listed is "first street  
21 flooded, Bear Creek Village, Hickory Grove Drive." And  
22 the second one is "pool reaches 80 percent of  
23 government-owned land."

24 Q. And, at that elevation, what is the listed  
25 Harris County Flood Control District action and

1 response?

2 A. For the pool reaches 80 percent of  
3 government-owned land, it's "issue major flood warning  
4 house -- for houses for Bear Creek Village."

5 Q. And, in issuing flood warnings, does the  
6 flood control district make a distinction between  
7 street flooding and house or structure flooding?

8 A. Yes, in general. But the flood warnings go  
9 out through the National Weather Service. And they  
10 have pretty strict definitions of major flooding and  
11 minor flooding. And they have different terms like  
12 that. And I'm not familiar with all those terms.

13 Q. Okay. Very good.

14 If you bump up to the 106.6 elevation -- flow  
15 elevation on this particular page, what is the Harris  
16 County Flood Control District's listed action and  
17 response?

18 A. At elevation 109, "expand major flood warning  
19 for potential impact areas."

20 Q. And your understanding is the flood control  
21 district would coordinate those warnings with, you  
22 said, the National Weather Service?

23 A. Yes, and others on the ABECT team.

24 Q. And does Harris County Flood Control District  
25 also communicate with local news channels and other

1 outlets for getting information out in the event of a  
2 rising pool?

3 A. It's -- Harris County Flood Control District  
4 works through the Harris County Office of Emergency  
5 Management, who has -- who most of that communication  
6 goes through. But staff there -- like Jeff, Jeff was  
7 here last week. Jeff is usually there at Harris County  
8 Office of Emergency Management, and sometimes others.  
9 So all that's coordinated among all the different  
10 agencies.

11 Q. And when you say "Jeff," you're referring to  
12 Jeff Lindner?

13 A. Yes. Sorry.

14 Q. All right. Mr. Fitzgerald, I want to turn  
15 next to Hurricane Harvey and talk about that particular  
16 event.

17 First of all, did you -- did you work  
18 Hurricane Harvey -- the Hurricane Harvey event in your  
19 capacity with Harris County Flood Control District?

20 A. Yes.

21 Q. And can you describe what your role and  
22 responsibilities were during that event?

23 A. I was -- I had been the flood watch leader  
24 for Harris County Flood Control for I don't know how  
25 long, a long time, many years. And -- but, in 2017 --

1 starting in 2016, I was trying to transition to other  
2 people to do more what I used to do because I knew I  
3 was going to be retiring in one to three years.

4 So when Harvey came up, I was trying -- I did  
5 that. I let others step up. But I was the incident  
6 commander during the evening times on the first three  
7 nights, I believe it was. So I was in charge of the --  
8 of the -- what we do at the Harris County Flood Control  
9 District during an event, not Harris County Office of  
10 Emergency Management. We're -- we're in very close  
11 contact with them.

12 Q. And you mentioned your role over time as a  
13 flood watch leader. Related to that, have you worked  
14 every flood event in Harris County since you started at  
15 the flood control district back in the mid '80s?

16 A. Probably since 1983, I worked 95 percent of  
17 every flood and near-flood event.

18 Q. Did Hurricane Harvey -- some folks have  
19 referred to as Tropical Storm Harvey here. Did that  
20 storm create an emergency situation for Harris and Fort  
21 Bend Counties?

22 A. Yes.

23 Q. And why? Can you explain that?

24 A. Well, anytime there's a tropical system in  
25 the Gulf, we get worried because it could -- it could



1 head this way. And so we don't know when an emergency  
2 would start, it would begin, but we take it very  
3 seriously. We start coordinating with others in the  
4 community at other agencies and the ABECT team.

5 And so -- but with the forecast of the  
6 potential rainfall, as it got higher and higher, as it  
7 got closer to the coast, we took it more and more  
8 seriously, as well as everyone else in Harris County.

9 Q. Sure. And as someone who's worked on maybe  
10 95 percent of the floods that have happened in Harris  
11 County since about 1983, how -- how would you compare  
12 the, you know, emergency situation created by Hurricane  
13 Harvey in Harris County with the other flood events  
14 that you've worked on over that period of time?

15 A. It started out like almost any other tropical  
16 system, but it quickly escalated once it got closer to  
17 the coast and made landfall on Friday in Rockport or  
18 near Rockport. But the rainfall forecasters all rated  
19 it high. And I was thankful that Judge Bennett, you  
20 know, closed the county down on Friday. And most of  
21 the schools closed on Friday to prepare for this event.  
22 So I was very happy for that.

23 At the time, we didn't know what the impact  
24 was going to be, but the forecast of the rainfalls was  
25 astronomical. So we were glad. But as it went on, it

1 got -- it got worse and worse. So ...

2 Q. Was the ABECT group activated in anticipation  
3 of Harvey making landfall?

4 A. Yes. I believe our first call was on  
5 Wednesday. I don't know -- I didn't keep up with the  
6 calendar days. I know the week -- days of the week, so  
7 I don't want to confuse -- I don't know what day that  
8 is of the month.

9 MS. TARDIFF: May I approach, Your Honor?

10 THE COURT: Yes.

11 MS. TARDIFF: For counsel, I'm going to hand  
12 Mr. Fitzgerald what's been marked as Joint Exhibit 293.  
13 It's just a blank calendar.

14 BY MS. TARDIFF:

15 Q. So you mentioned Wednesday before Harvey  
16 arrived. Looking at Joint Exhibit 293, can you tell us  
17 what date that was?

18 A. That was August 23rd.

19 Q. And, stepping back to make sure I heard you  
20 correctly, was that the first time that the ABECT group  
21 met?

22 A. I think it was. So we could have been -- you  
23 know, the ABECT group is everyone, all the different  
24 organizations. But, in my role as coordinating with  
25 the Corps and other -- sometimes other agencies, we may

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1 start phone calls one on one. But ABECT was my primary  
2 contact. So that could have happened before. I just  
3 don't keep records of all of those.

4 Q. And in connection with Harvey, do you have a  
5 recollection as to whether you started having  
6 one-on-one calls with your contacts at the Corps even  
7 before the ABECT group started meeting or having  
8 regular calls?

9 A. I'm pretty sure I did, but it's kind of fuzzy  
10 now in my head.

11 Q. And, generally speaking, can you describe for  
12 us how the ABECT team was communicating as a group  
13 during Hurricane Harvey?

14 A. We had conference calls -- regularly  
15 scheduled conference calls twice a day. The first one  
16 started on the 23rd in the morning. We had one in the  
17 morning, one in the afternoon. And that was the  
18 primary communications.

19 Q. Were there also email communications during  
20 that time?

21 A. There was email information that was  
22 exchanged during that time. We didn't usually do too  
23 much discussion on emails, mostly information exchange.

24 Q. Okay. And what kind of information was the  
25 Corps transmitting to the ABECT group via email?

1           A.     The primary -- what they sent to us was their  
2     latest model results of projections for Addicks and  
3     Barker.

4           Q.     And does -- do those modeling results also go  
5     by an acronym?

6           A.     Yes.   It's called CWMS.   S-W-M-S [sic], I  
7     think it is.   I can't remember what it stands for.  
8     It's another one of those acronyms.   But it's hydrology  
9     and hydraulic models.   But it's a suite of models that  
10    the Corps uses across the United States to manage their  
11    training systems across the United States.

12          Q.     And is it -- is the CWMS information that was  
13    being transmitted, is that a forecast?

14          A.     It includes what's -- at the time that the  
15    models run, it includes what the situation is up to  
16    that point and then a forecast projection beyond that.

17          Q.     Okay.   Let's take a look at that and make it  
18    easier.   I'm going to have you turn to Joint  
19    Exhibit 146.

20                 And, Mr. Fitzgerald, do you have Joint  
21    Exhibit 146 in front of you?

22          A.     Yes.

23          Q.     And are you one of the listed recipients on  
24    this email?

25          A.     Yes.

1 Q. Along with many others.

2 And what is the date of this email and time?

3 A. It is Friday, August 25th, 2017, at 2:26 p.m.

4 Q. And what is the subject of this email?

5 A. "SWMS forecast for August 25th, 2017, to  
6 September 24th, 2017."

7 MS. TARDIFF: Your Honor, we'd move to admit  
8 Joint Exhibit 146.

9 THE COURT: It's already in evidence.

10 MS. TARDIFF: Oh, I apologize.

11 BY MS. TARDIFF:

12 Q. So we'll go ahead and -- and let me ask you a  
13 few questions about this. First of all --

14 THE COURT: Now, just a moment. I have a  
15 note that it came in through Mr. Vogler.

16 Well -- all right. If it didn't come in  
17 through Mr. Vogler, it does come in now. One or  
18 another, it's admitted. (Joint 146 admitted.)

19 MS. TARDIFF: Thank you, Your Honor.

20 THE COURT: I think it came in through  
21 Mr. Vogler.

22 BY MS. TARDIFF:

23 Q. Mr. Fitzgerald, looking at the list of  
24 recipients at the top of this email, does that listing  
25 include participants in the ABECT group?

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1 A. Yes.

2 Q. Are there more than just your regular group  
3 participants in the ABECT group listed here?

4 A. Yes, a lot more.

5 Q. And you described for us what a CWMS forecast  
6 is here, but let me ask you about this -- the sender of  
7 this email is Michael Kauffman. Do you know  
8 Mr. Kauffman?

9 A. Yes.

10 Q. And who is he?

11 A. He's in the hydrology and hydraulics  
12 department at the Corps of Engineers in Galveston.

13 Q. And is Mr. Kauffman one of the individuals  
14 that the Corps involved in preparing and transmitting  
15 these CWMS forecasts to the ABECT group and others  
16 listed here?

17 A. Yes. He does the modeling. He's very good  
18 at it.

19 Q. So let's actually turn to the CWMS forecast  
20 which is attached here. And what's the date of this  
21 particular CWMS forecast?

22 A. August 25th, 2017, which is Friday.

23 Q. And I'm looking at the second paragraph on  
24 the page that is COH-DOJ8154. Are you on that same  
25 page?

1 A. Yes.

2 Q. You had mentioned earlier that the forecast  
3 uses rainfall forecast as one of its inputs. Here, it  
4 states -- it makes a reference to the seven-day QPF is  
5 showing accumulation of approximately 23 inches.

6 Do you see that?

7 A. Yes.

8 Q. And, based on that forecasted rainfall of  
9 23 inches, what did this CWMS forecast tell you about  
10 pool elevations in Addicks and Barker reservoir?

11 A. Well, Michael has this table in front to  
12 summarize it. He has a peak forecasted reservoir level  
13 for Addicks at 105 plus and Barker at approximately  
14 100.

15 Q. And, Mr. Fitzgerald, there are also some  
16 tables at the back. And, as an engineer, are those  
17 tables that you would have looked at for additional  
18 information about this forecast?

19 THE COURT: Ms. Tardiff, what is the page  
20 we've been looking at?

21 MS. TARDIFF: The page we were just looking  
22 at is -- there's two Bates numbers. I was referring to  
23 the one that is COH-DOJ8154. And then I am turning and  
24 directing Mr. Fitzgerald to the same Bates numbering  
25 ending in 8156 and 8157.

1 BY MS. TARDIFF:

2 Q. And, Mr. Fitzgerald, are the graphs that are  
3 shown on those two pages familiar to you?

4 A. Yes.

5 Q. And, as an engineer involved in the ABECT  
6 group, would you have looked at these graphs for  
7 additional information?

8 A. Yes.

9 Q. And you mentioned that they -- the CWMS  
10 forecast tells you both what's already occurred and  
11 what's forecast. Can you just explain that generally  
12 in terms of the graphs before you.

13 A. Yes. On the graphs on the first page, the  
14 Addicks Reservoir forecast -- and there's a vertical  
15 dashed line that's heavy, bold. And that is the time  
16 that Michael ran this simulation. So it's the current  
17 time. So anything to the left of that is what was  
18 observed and to the right of that is projected.

19 Q. All right. Mr. Fitzgerald, I'm going to have  
20 you turn next to Defendants' Exhibit 340.

21 And, Mr. Fitzgerald, are you a recipient of  
22 this email?

23 A. Yes.

24 Q. And can you tell us the date and time of this  
25 email?



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1 A. It is August 26th, 2017, at 12:31 p.m.

2 Q. And is this the transmittal of another CWMS  
3 forecast from Mr. Kauffman?

4 A. Yes.

5 MS. TARDIFF: We move to admit  
6 Defendants' 340.

7 THE COURT: Mr. Dunbar?

8 MR. DUNBAR: No objection, Your Honor.

9 THE COURT: Admitted.

10 (Whereupon, Defendants' Exhibit 340 was  
11 admitted into evidence.)

12 BY MS. TARDIFF:

13 Q. Mr. Fitzgerald, I'm going to have you turn to  
14 the first page of the attached CWMS forecast again.  
15 The Bates number at the bottom is COH-DOJ8241.

16 And looking at the CWMS forecast, what did  
17 this particular forecast, which is now dated  
18 8/26/2017 -- what was the forecast with respect to when  
19 the Addicks and Barker pools would reach  
20 government-owned land?

21 A. Again, reading from the table -- summary  
22 table on the first page, it says 103 for Addicks and 95  
23 on Barker.

24 Q. And does that table -- did that also give you  
25 a date and time when that was forecasted to occur?

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1           A.    Yes.  Looks like it did include that just to  
2   the right of those numbers on that table.

3           Q.    And just below that, did this CWMS forecast  
4   on August 26th, 2017, also include a line item for  
5   first home flooded at each of those reservoirs?

6           A.    Yes.

7           Q.    Along with a time -- date and time?

8           A.    Yes.  It does include that on the table as  
9   well.

10          Q.    And did this forecast also include a forecast  
11   for the peak elevations of each reservoir based on  
12   actual rainfall and then what was forecasted still to  
13   come?

14          A.    Yes, it does.

15          Q.    And that's at the bottom of that table?

16          A.    Yes.

17          Q.    If we look up at the second paragraph of this  
18   forecast -- and I'm reading the second sentence -- it  
19   says "At this time, we are not expected to make  
20   mandatory releases for surcharge operations."

21                Do you see that sentence?

22          A.    Yes.  I do now.

23          Q.    And was the issue of releases from the  
24   reservoir during the storm also a subject of calls with  
25   the ABECT group?

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1 A. Yes.

2 Q. I'm going to have you turn next to  
3 Defendants' Exhibit 3.

4 THE COURT: Ms. Tardiff?

5 MS. TARDIFF: Yes, sir.

6 THE COURT: You're on a roll, but it's about  
7 time for our afternoon recess.

8 MS. TARDIFF: I --

9 THE COURT: Can we take it?

10 MS. TARDIFF: Absolutely.

11 THE COURT: Mr. Fitzgerald, do you mind?

12 THE WITNESS: I'm ready.

13 THE COURT: You're ready.

14 Mr. Dunbar?

15 MR. DUNBAR: No problem, Your Honor.

16 THE COURT: All right. We're in recess.

17 THE CLERK: All rise. Court is in recess.

18 (Whereupon a short recess was taken.)

19 THE CLERK: All rise. United States Court of  
20 Federal Claims is now in session, the Honorable Charles  
21 F. Lettow presiding.

22 THE COURT: Please be seated.

23 Mr. Fitzgerald, welcome back.

24 Ms. Tardiff, you may proceed.

25 MS. TARDIFF: Thank you, Your Honor.

1 BY MS. TARDIFF:

2 Q. Mr. Fitzgerald, I'm going to return back to  
3 some of the CWMS forecasts that we've been looking at.  
4 The next one I'm going to ask you to take a look at is  
5 Defendants' Exhibit 360. And that should be in that  
6 same notebook.

7 Do you have that in front of you, sir?

8 A. Yes.

9 Q. Okay. Once again, Mr. Fitzgerald, are you a  
10 listed recipient on this email?

11 A. Yes.

12 Q. And can you --

13 THE COURT: I'm sorry. Let's stop just a  
14 minute. You said this is DX which number?

15 MS. TARDIFF: 360.

16 THE COURT: Oh, I thought you said 350. I'm  
17 sorry.

18 Yes. Go ahead.

19 MS. TARDIFF: Thank you.

20 BY MS. TARDIFF:

21 Q. And what is the date and time of this email,  
22 Mr. Fitzgerald?

23 A. This one is 8/27/2017 at 2:02 p.m.

24 Q. And is this another transmittal of an updated  
25 CWMS forecast from Mr. Kauffman at the Corps?

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1 A. Yes.

2 MS. TARDIFF: We'd move to admit  
3 Defendants' 360.

4 MR. DUNBAR: No objection.

5 THE COURT: Admitted.

6 (Whereupon, Defendants' Exhibit 360 was  
7 admitted into evidence.)

8 BY MS. TARDIFF:

9 Q. Let's turn again briefly to the attached CWMS  
10 forecast which is dated 8/27/2017.

11 Before the break, we talked about the  
12 forecast in Defendants' Exhibit 340, which was the day  
13 before. And there was a reference to mandatory  
14 releases.

15 If you'd take a look at the second paragraph  
16 here, Mr. Fitzgerald, it states "At this time,  
17 mandatory releases are expected to be necessary for  
18 surcharge operations at Addicks later tonight and at  
19 Barker on Wednesday."

20 And, once again, my question is was the  
21 subject of releases from the reservoir during the event  
22 a subject of the phone calls with the Addicks group  
23 during the event?

24 A. Yes.

25 Q. And did the Corps subsequently initiate those

1 releases from the reservoir during the event?

2 A. Yes.

3 Q. If we look down on the table here on this  
4 page, which is COH-DOJ8575, we've already discussed a  
5 couple of the listings here. But the first two refer  
6 to -- it says "EW Stage 1 RES level," and then, below  
7 that, "EW Stage 2 RES level."

8 And, Mr. Fitzgerald, do you understand what  
9 those references are to?

10 A. I don't usually pay attention to those  
11 because those are within the reservoirs and those mean  
12 more to the Corps than to the rest of us.

13 Q. Okay. Do you know if those are connected  
14 with the emergency action plan?

15 A. They're a list of the emergency action plan.

16 Q. We're going to turn next to Defendants' 384.

17 And, Mr. Fitzgerald, are you again a listed  
18 recipient of this email?

19 A. Yes.

20 Q. And what is the date and time of this email?

21 A. August 28th, 2017 --

22 Q. And --

23 A. -- at 4:16, I think. Zero -- 4:16 a.m.

24 Q. A.m. Thank you.

25 And is this another transmittal of an updated

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1 CWMS forecast from Mr. Kauffman at the Corps to the

2 ABECT group and anybody else listed here?

3 A. Yes.

4 MS. TARDIFF: We move to admit

5 Defendants' 384.

6 MR. DUNBAR: No objection.

7 THE COURT: Admitted.

8 (Whereupon, Defendants' Exhibit 384 was  
9 admitted into evidence.)

10 THE WITNESS: That's on -- it's on Monday.

11 BY MS. TARDIFF:

12 Q. Thank you.

13 And looking back at your experience with  
14 Harvey, what's your recollection of -- of what the  
15 rainfall was like from the time it began through -- you  
16 know, we're now at Monday. What was that rainfall like  
17 over the weekend?

18 A. Are you referring to the Addicks and Barker  
19 watershed or just in general?

20 Q. Well, let's start with in general.

21 A. My recollection is we had a little bit of  
22 rain on Thursday or Friday, I think, small amount of  
23 rain as the system was coming closer to the coast. And  
24 Saturday, during the day, early part of the day, wasn't  
25 too bad. But then it really picked up in the afternoon

1 and evening at night. And that's when the heaviest  
2 rain started impacting Harris County, was Saturday  
3 evening, Saturday night down in the southeast part of  
4 the county, which ended up with the record rainfall  
5 levels.

6 Q. And did that heavy rain continue after  
7 Saturday night?

8 A. Yes. And it depended on where you were in  
9 the county and what watershed you were in as to how it  
10 ebbed and flow, like any storm event. But it continued  
11 Sunday. And Sunday afternoon and evening, even got  
12 heavier. And then Monday it continued, not quite as  
13 heavy as on Sunday, but on Monday it continued. And  
14 didn't really leave Harris County probably until  
15 Tuesday afternoon on eastern side of the county.

16 Q. Okay. And then let's -- let's pull back to  
17 the Addicks and Barker watersheds and referring to the  
18 CWMS forecast, here we have for August 28th at -- and  
19 referring to the first paragraph, what was the CWMS  
20 forecast reporting to you in terms of rainfall that had  
21 already occurred and then the rainfall that was  
22 forecasted yet to come at that time?

23 A. Could you repeat the question.

24 Q. Sure. I'm looking at the CWMS forecast  
25 that's attached to the email that is Defendants'



1 Exhibit 384. I'm on the first page of the forecast,  
2 which is COH-DOJ8867.

3 And looking at that first paragraph, what did  
4 this CWMS forecast that was transmitted to the ABECT  
5 group tell you about the amount of rainfall that had  
6 already fallen in the Addicks and Barker watershed and  
7 the amount of rain that was still forecasted to come in  
8 that area?

9 A. In the first paragraph, Michael said that the  
10 watersheds -- Addicks and Barker watersheds had  
11 received 25 to 28 inches since the beginning of the  
12 event and forecasted rainfall amounts are in flux.  
13 Then he says the seven-day accumulation assumed for  
14 this forecast is 25 inches, as received from the river  
15 forecast center, which would be the next seven days  
16 beyond that time before -- before August 28th -- or  
17 after August 28.

18 Q. And looking down at the table on the same  
19 page, did this CWMS forecast add a page as to a  
20 forecast for flows around the end of the dam or end of  
21 either dam? And I'm looking at the row below  
22 "Mandatory releases begin."

23 A. Oh, yes. It's in the same paragraph. I was  
24 looking down at the table.

25 It says, "Releases had begun at Addicks and

1 Barker tonight due to the speed at which the pools have  
2 been rising. We're expected to have water around the  
3 north end of Addicks later tonight with peak flows of  
4 about 22,000 cfs on Friday morning."

5 Q. And at that point, that was -- that was the  
6 forecast based on conditions that had occurred and what  
7 was forecasted to come; is that accurate?

8 A. Yes.

9 Q. Let's turn next to Defendants' 396.

10 And, Mr. Fitzgerald, once again, are you a  
11 recipient of this email?

12 A. Yes.

13 Q. And what is the date and time?

14 A. It is Tuesday, August 29th, at 4:51 a.m.

15 Q. And is this the transmittal from Mr. Kauffman  
16 of another updated CWMS forecast?

17 A. Yes.

18 MS. TARDIFF: We move to admit  
19 Defendants' 396.

20 MR. DUNBAR: No objection.

21 THE COURT: Thank you, Mr. Dunbar. Admitted.

22 (Whereupon, Defendants' Exhibit 396 was  
23 admitted into evidence.)

24 BY MS. TARDIFF:

25 Q. And as with the last CWMS forecast we've seen

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1 again, did this CWMS forecast provide an update on both  
2 existing conditions and then forecasted conditions  
3 after the date of the report?

4 A. Yes.

5 Q. Let's turn to Defendants' 415.

6 And, Mr. Fitzgerald, are you a recipient of  
7 this email?

8 A. Yes.

9 Q. Can you tell me the date and time?

10 A. It would be August 30th at 6:02 a.m.

11 Q. And by this --

12 A. Excuse me. It's on Wednesday.

13 Q. Thank you, sir.

14 And does this email from Mr. Kauffman  
15 transmit another updated copy of the CWMS forecast?

16 A. Yes.

17 MS. TARDIFF: We move to admit  
18 Defendants' 415.

19 MR. DUNBAR: No objection.

20 THE COURT: Admitted.

21 (Whereupon, Defendants' Exhibit 415 was  
22 admitted into evidence.)

23 BY MS. TARDIFF:

24 Q. Mr. Fitzgerald, one quick question on this  
25 one. If you turn to the forecast itself on the page

1 beginning COH-DOJ9758.

2 Do you see that?

3 A. Yes.

4 Q. And looking at the second paragraph, what did  
5 this CWMS forecast tell the recipient of the forecast  
6 regarding the peak of -- for the Addicks Reservoir?

7 A. You said look at the second paragraph?

8 Q. Yes, sir.

9 A. About the peak? Okay.

10 What you ask about, it says "Addicks is  
11 expected to peak today before the emergency spillway is  
12 activated. The Barker Reservoir pool is not expected  
13 to flank the ends of the dam."

14 Q. Let's do one more. I'm going to have you  
15 turn to Defendants' Exhibit 427.

16 And, again, Mr. Fitzgerald, are you one of  
17 the listed recipients on this email?

18 A. Yes.

19 Q. And can you give us the date and time of this  
20 email?

21 A. It's Thursday, August 31st, at 3:38 a.m.

22 Q. And by this email, did Mr. Kauffman again  
23 transmit an updated CWMS forecast to all of the  
24 recipients on this list?

25 A. Yes.

1 MS. TARDIFF: We move to admit

2 Defendants' 427.

3 MR. DUNBAR: No objection.

4 THE COURT: Admitted.

5 (Whereupon, Defendants' Exhibit 427 was  
6 admitted into evidence.)

7 BY MS. TARDIFF:

8 Q. I'm going to turn back to the 2018 federal  
9 briefing, which is Defendants' 737.

10 And, Mr. Fitzgerald, my first question is is  
11 the Addicks and Barker project we've been discussing,  
12 is that the only federal flood control or flood risk  
13 reduction project in Harris County?

14 A. No.

15 Q. No. And are you generally familiar with the  
16 other active federal flood control or flood risk  
17 reduction projects in Harris County?

18 A. Yes.

19 Q. And is Harris County Flood Control District a  
20 local sponsor for those other projects?

21 A. Yes, for the other projects, they are the  
22 local sponsor.

23 Q. I'm going to have you turn in the report to  
24 FEMA page 78373. And, Mr. Fitzgerald, there is a table  
25 on this page. The title is "Active Federal Project

1 Status Summary."

2 Can you describe for us the information  
3 that's contained in this table in the flood control  
4 district's 2018 federal briefing report?

5 A. Yes. These are the federal projects where  
6 there's some action going on on them in 2018 and just a  
7 brief one-page summary of information about each one.

8 Q. And these are listed as active projects.  
9 What does that mean?

10 A. That means they are not completed.

11 Q. And are all of the projects that are listed  
12 here projects that Harris County Flood Control District  
13 is partnering with the Corps of Engineers on in Harris  
14 County?

15 A. Yes. In some way or another. The last two  
16 are on hold as a federal project, Halls Bayou and  
17 Buffalo Bayou main stem. Those are on hold. The ones  
18 above that are active.

19 Q. Let's turn to the next page, which is FEMA  
20 78375.

21 And, Mr. Fitzgerald, what is the information  
22 that's summarized in this table at 78375?

23 A. These are milestone date summary of all the  
24 federal projects, Corps of Engineers federal projects  
25 in Harris County in three categories: those that are

1 completed, those under construction, and those that are  
2 authorized but no work has been done past  
3 authorization.

4 Q. And if we turn to the next page, which is  
5 78376, what does this map show us?

6 A. This is a schematic layout of the active and  
7 completed Corps of Engineers federal projects in Harris  
8 County.

9 Q. And are some of those active and completed --  
10 or do some of those active and completed projects,  
11 other than Addicks and Barker, include detention  
12 basins?

13 A. Yes. The regional detention basins are along  
14 most all of them.

15 Q. With respect to other detention basins for  
16 which Harris County Flood Control District was  
17 responsible for, were those detention basins  
18 overwhelmed by the rainfall during Harvey?

19 A. Yes. During Harvey every watershed was  
20 impacted by the heavy rainfall, which was the first  
21 time probably in modern history. And they were all  
22 overwhelmed, you know, after the first 12 to 14 inches  
23 of rain, maybe a little more on some of them.

24 Q. And did Harris County see structure or house  
25 flooding around some of those detention basins in

1 Harris County during Harvey?

2 A. I don't know about -- specifically about  
3 locations around the detention basins, but there was  
4 extensive house flooding across Harris County due to  
5 Hurricane Harvey.

6 Q. In every watershed?

7 A. In every watershed -- every major watershed.

8 MS. TARDIFF: Thank you, sir. I don't have  
9 any further questions.

10 THE COURT: Thank you, Ms. Tardiff.

11 Mr. Dunbar, cross-examination.

12 CROSS-EXAMINATION

13 BY MR. DUNBAR:

14 Q. Good afternoon, Mr. Fitzgerald. My name's  
15 Larry Dunbar. We've met before?

16 A. Yes.

17 Q. We know each other quite well?

18 A. Yes.

19 Q. Did you meet with the government lawyers  
20 before you testified today?

21 A. Yes.

22 Q. For how long?

23 A. Probably an hour or so.

24 Q. And on what day?

25 A. What day? I don't remember what day. Couple



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1 of weeks ago, probably.

2 Q. Okay. Did you meet with any of the  
3 plaintiffs' counsel in this case before today?

4 A. Yes.

5 Q. Who?

6 A. It was during the deposition.

7 Q. Oh, but ...

8 A. There was a lot of attorneys there. I didn't  
9 know who everybody was.

10 Q. But within the last few months.

11 A. Not after the deposition, no.

12 Q. Okay. You aware that Mr. Easterby, with our  
13 group, asked to meet with you but that that request was  
14 declined?

15 A. Yes.

16 Q. Are you being paid by the federal government  
17 for your testimony?

18 A. No.

19 Q. So you're doing it voluntarily?

20 A. Yes.

21 Q. And is that to help out the federal  
22 government?

23 A. No. It's to provide as accurate information  
24 as I can so that the people making decisions can make  
25 more -- make a better decision with the information.

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1 Q. Okay. And you had been -- worked as an  
2 expert witness on behalf of the federal government in  
3 the St. Bernard Parish case?

4 A. Yes.

5 Q. And did you use a HEC-RAS model for that  
6 case?

7 A. Yes.

8 Q. In your testimony, you had sometimes referred  
9 to Addicks and Barker reservoirs; correct?

10 A. I'll take your word for it.

11 Q. Have you ever referred to the Addicks  
12 Reservoir?

13 A. Yes.

14 Q. Have you ever referred to the Barker  
15 Reservoir?

16 A. Yes.

17 Q. When you use that term, Addicks Reservoir,  
18 what are you exactly referring to? What area of the  
19 land are you referring to?

20 A. To me, it's just the names of the facilities  
21 that are built by the Corps in western Harris County.

22 Q. So you're really talking about Addicks Dam?

23 A. I think of them as just, you know, the whole  
24 unit -- the dam, the land, everything.

25 Q. The land being the government-owned land?

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1           A.    I don't usually think about that. I just  
2    think of them as detention basins and that's their  
3    name.

4           Q.    Okay. Because you -- you had mentioned the  
5    Corps owns, operates, and maintains Addicks and Barker  
6    reservoirs.

7                    So does the Corps of Engineer own the land  
8    behind Addicks Dam that encompasses the entire  
9    reservoir pool?

10          A.    Based on what I know, including some reports  
11    we went over earlier, we -- the pool goes off the  
12    government-owned land.

13          Q.    Okay.

14          A.    Can go off the government-owned land.

15          Q.    Okay. You had talked about the Harvey  
16    rainfall that occurred over Harris County and then at  
17    flood levels; correct?

18          A.    Yes.

19          Q.    Do you know how many homes there are in  
20    Harris County, approximately? A million?

21          A.    Yeah, because the estimate that we did --  
22    rough -- not rough. Got information from different  
23    jurisdictions in an estimate. Just in Harris County  
24    was like 154,000 homes that flooded. And that was  
25    about 10 or 12 percent of the number of structures

1 on -- on the HCAD list, Harris County Appraisal  
2 District list, just a rough estimate.

3 Q. Okay. So for rainfall Harvey, that dumped 30  
4 to 50 inches of rain in Harris County and about 10 or  
5 so percent of the homes flooded, you still think that  
6 every house in Harris County has a risk of flooding?

7 A. Yes.

8 Q. From what kind of event?

9 A. It would be different depending on the  
10 location of the watershed.

11 Q. How much rain is needed to flood every house  
12 in Harris County?

13 A. I -- I think your expert should be better at  
14 answering that question than me.

15 Q. Did you work for flood control for over 30  
16 years?

17 A. Yes.

18 Q. You've been the chief engineer for over 20  
19 years?

20 A. Yes.

21 Q. You've been studying rainfall in Harris  
22 County over that time?

23 A. Yes.

24 Q. Okay. And 50 inches of rain over Harris  
25 County flooded 10 percent of the homes.

1           A.     The rainfall was not the same in every  
2     watershed during Hurricane Harvey.

3           Q.     At least 30 inches of rain fell over all of  
4     Harris County; correct?

5           A.     I think it was -- I think the most -- I think  
6     there was some areas that were less than that still.

7           Q.     Okay.

8           A.     Just from my memory. I don't have that  
9     information in front of me right now.

10          Q.     Okay. Well, could 100 inches of rain flood  
11     every house in Harris County?

12          A.     Possibly.

13          Q.     You know how high 100 inches of rain would  
14     produce in terms of water levels throughout the county?

15          A.     I don't know.

16          Q.     You have no idea, do you? You have no idea,  
17     do you?

18          A.     It would be high.

19          Q.     You had talked about the '92 flood setting  
20     record pool levels at Addicks and Barker reservoirs;  
21     correct?

22          A.     Yes.

23          Q.     And isn't it true that the character of the  
24     flooding associated with the reservoir pool was  
25     different than the character flooding associated with

1 the river -- like riverine bayou flood?

2 A. Could you repeat the question.

3 Q. Sure. You remember I took your deposition in  
4 this case?

5 A. Yes.

6 Q. Okay. And do you remember we talked about  
7 the nature of the flooding associated with the  
8 reservoir pool causing a more prolonged period of  
9 flooding than typical for a bayou flooding? Remember  
10 that?

11 A. Yes.

12 Q. Okay. And do you remember you talking about  
13 how the character of the flooding associated with the  
14 reservoir pool is different in part because of the  
15 extended length of time that that inundation or  
16 flooding would occur?

17 A. Yes.

18 Q. Okay. And it's also true that, you  
19 indicated, that the flooding in a reservoir pool was  
20 different, especially in Addicks and Barker, because  
21 that water level causing the flooding can start to go  
22 down but then, from a subsequent storm, come back up  
23 again because these reservoirs can't release enough  
24 water fast enough; correct?

25 A. Yes. The elevations can go up and down as

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1 related to how much rainfall and runoff is coming in  
2 and how much is being released out of the outlets.

3 Q. And this is kind of what you saw in the '92  
4 flood, right, that you had rain for months. It wasn't  
5 associated with just one storm; right?

6 A. Correct.

7 Q. Wasn't even associated with two or three  
8 storms over a two- or three-week period; correct?

9 A. Some number. I don't remember how many.

10 Q. Well, it was months, because you said in late  
11 '91 it started to rain and continued to rain through  
12 March of 1992; correct?

13 A. Off and on, yes.

14 Q. Okay.

15 A. I don't remember the exact number of storms,  
16 though.

17 Q. Okay. And that's something that could make  
18 flooding, even in a reservoir, different than the  
19 flooding you would see on a stream where it's going to  
20 go up -- it's going to come down fairly quickly, a day  
21 or two, compared to a month; correct?

22 A. Yes, that could happen.

23 Q. Now, there was discussion about the fringe  
24 area in a reservoir.

25 Do you recall that?

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1 A. Yes. It was reports that we read from.

2 Q. Right. And what is a fringe area in that  
3 reservoir?

4 A. In that context, I believe it means the area  
5 between the government-owned land and wherever the  
6 boundary of the pool is.

7 Q. Okay. Do you know what that boundary of the  
8 pool was defined as?

9 A. No.

10 Q. Okay. And is that fringe area area that  
11 development is in?

12 A. There's -- there's development in fringe --  
13 in the fringe area.

14 Q. And was there development approved by Harris  
15 County for that fringe area?

16 A. I can only assume it was.

17 Q. Because it's in Harris County?

18 A. Because it's in Harris County. It's there.

19 Q. All right.

20 A. I don't know if they got permits or not for  
21 it, but I assume they did.

22 Q. Because doesn't Harris County regulate and  
23 permit all development in Harris County?

24 A. Unincorporated Harris County.

25 Q. Yes. And this was unincorporated Harris



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1 County?

2 A. Yes, unincorporated Harris County.

3 Q. Okay. If you could turn to Joint Exhibit 88.

4 This was the -- these were the -- remember the water  
5 impact tables?

6 A. Action response plan?

7 Q. Action response plan, where you had these  
8 different water levels for different conditions  
9 occurring in the reservoir, whether it was the first  
10 street flooding, first home flooding, flow around the  
11 north end of the dam, et cetera.

12 Do you remember that?

13 A. Yes, I remember that.

14 Q. And the judge asked you some questions about  
15 that. And one of the questions was he was noticing  
16 that the natural ground elevation is less than the  
17 spillway elevation.

18 Do you recall that?

19 A. Yes.

20 Q. And you, I believe, had indicated you maybe  
21 thought that was due to subsidence?

22 A. No, I did not say that.

23 Q. Okay. Good.

24 Does that make sense to you that a spillway  
25 elevation would be higher than a natural ground it ties

1 into?

2 A. Doesn't have to make sense to me. It's just  
3 the way it is.

4 Q. Okay. Do you know any detention ponds in  
5 Harris County that were built to have the spillway  
6 elevation higher than the ground it ties into?

7 No, do you?

8 A. Not that I'm aware of.

9 Q. That's right.

10 And isn't the purpose of a spillway is to  
11 allow the water to flow out of the detention basin  
12 before it starts to spill over natural ground or an  
13 earth embankment?

14 A. I think for most facilities, that's correct.

15 Q. And it kind of makes sense, doesn't it?

16 A. Yes.

17 Q. Yeah. Okay. So do you know when Addicks and  
18 Barker were built, based upon your review of documents,  
19 whether they had spillways at that time back in the  
20 '40s?

21 A. I don't recall.

22 Q. Okay. Do you recall when -- in the '80s when  
23 Addicks and Barker dams were -- the embankments were  
24 raised?

25 A. I know the Corps did work in the early '80s

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1 because I had just arrived at flood control and that  
2 work was ongoing, and I know there was work done on the  
3 dam.

4 Q. Okay. And you've read documents that  
5 indicated that they raised the embankments; correct?

6 A. I don't remember that specifically. I just  
7 know there was work done.

8 Q. And you know that they concreted the spillway  
9 areas on each ends of each dam?

10 A. Yes.

11 Q. Okay.

12 A. I know that was done in that time period.

13 Q. Right. And do you know if those concreted  
14 sections of the spillway were raised above the natural  
15 ground level they tied into?

16 A. I don't know that.

17 Q. Okay. Would it have made sense to you that  
18 those spillways should have been set at or below the  
19 natural ground that they tie into?

20 A. I think that's something you need to ask your  
21 experts about.

22 Q. Okay. Have you asked the Corps that  
23 question?

24 A. No.

25 Q. Okay. I think the judge also asked a

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1 question about Highway 6 being flooded in Addicks  
2 Reservoir when the water level gets high enough. Do  
3 you recall that?

4 A. Yes.

5 Q. Okay. And is -- that part of Highway 6 that  
6 gets flooded when the water level in Addicks Reservoir  
7 gets high enough, is that part of the highway inside  
8 the reservoir itself?

9 A. Yes.

10 Q. Is it also within government-owned land?

11 A. Yes.

12 Q. Okay.

13 And then Highway 6, as it runs south of  
14 Interstate 10 and along or adjacent to Barker  
15 Reservoir, it's outside of the Barker Reservoir;  
16 correct?

17 A. Yes.

18 Q. On the east side; correct?

19 A. Yes, the east side.

20 Q. And, in fact, you can get on Highway 6 and  
21 look at the Barker Dam; correct?

22 A. Yes.

23 Q. Whereas Addicks, you're on Highway 6, you're  
24 in the Addicks Reservoir?

25 A. Yes. Once you go over the dam, yes.

1 Q. So these elevations that we see in Joint  
2 Exhibit 88, I think you had indicated that those may  
3 have been on older datum compared to the water levels  
4 that we may see in the emergency action plan of 2014.

5 A. Yes. And the elevations may have been  
6 refined based on more recent datum, surveys, all kinds  
7 of reasons. This was an early version.

8 Q. Okay. And so, if we really look into the  
9 2014 emergency action plan, that gives the most updated  
10 information; correct?

11 A. For 2014, yes.

12 Q. Right.

13 A. I know it's been updated since then. I don't  
14 know --

15 Q. And if you make the appropriate datum  
16 adjustments, you can go back in time and see, for  
17 different datums, what those elevations would correlate  
18 to back in those earlier points in time?

19 A. Yes.

20 Q. Okay. And you can see, at those elevations,  
21 the match and tie-in with the elevations shown in Joint  
22 Exhibit 88?

23 A. That could be done, yes.

24 Q. The emails that the government lawyer went  
25 through that showed the CWMS forecasts, do you recall

1 those?

2 A. Yes.

3 Q. Aren't those CWMS forecasts marked for  
4 internal use only?

5 You know they are, don't you?

6 A. I don't know. They may be. I didn't look  
7 and see.

8 Q. Were they distributed to the public?

9 A. No.

10 Q. Okay. And, as you indicated, these CWMS  
11 forecasts, I think the first one was on the 23rd of  
12 August, if I recall Joint Exhibit 146.

13 A. I'll take your word for it.

14 Q. Okay. And then you basically were getting  
15 CWMS forecasts pretty much every day; correct?

16 A. Yes.

17 Q. Okay. And when did the public get warned  
18 that there was going to be flooding outside of the  
19 government-owned land in Addicks and Barker reservoirs  
20 by -- by the county?

21 A. I don't know.

22 Q. You don't know?

23 Would it surprise you to hear that it was  
24 late Sunday night, early Monday morning?

25 A. I don't know when it happened.

1 Q. You don't know? Okay.

2 And what kind of warning did you -- did  
3 Harris County give the public on those two dates?

4 A. I don't know.

5 Q. Okay. Did you know if Harris County warned  
6 those people to evacuate?

7 A. I don't know.

8 Q. You hadn't heard that they were asked to  
9 evacuate?

10 A. I heard discussions about it, but I don't  
11 know what -- what was ultimately decided.

12 Q. Okay. And why would you even discuss having  
13 people evacuate?

14 A. In my experience working floods for so long,  
15 when people think they might -- their house might be  
16 flooded or their car, they want to evacuate. They want  
17 to leave. They want to flee from the -- to get away  
18 from the water. So that's a natural reaction for most  
19 people.

20 Q. Right. And Harris County takes the position  
21 not to evacuate but stay in place; right?

22 A. We learned that in Tropical Storm Allison.  
23 Because 22 people died, but no one drowned in their  
24 homes. And so we learned that kind of as a nation  
25 during that -- during that time. For -- for rising

1 water from rivers and other things, people should go up  
2 rather than -- rather than fleeing because it's more  
3 dangerous to them when they're trying to flee.

4 Q. Yeah. And what about people who live in a  
5 one-story house or apartment, where do they go up?

6 A. They go up as high as they can.

7 Q. What's up beyond your first floor?

8 A. Up to the roof.

9 Q. Oh, okay.

10 A. In Allison, we had quite a few people on  
11 their roofs, and Harvey as well.

12 Q. Yeah. So the people behind the dams that may  
13 have 4 or 5 feet of water in their home, you would want  
14 them to stay in their home but go up on the roof?

15 A. And others. We heard lots of stories of  
16 neighbors helping neighbors, people with two-story  
17 homes are helping elderly. And that happened in  
18 Allison when there was 73, 74,000 homes flooded. The  
19 stories were actually incredible of neighbors helping  
20 neighbors and the infirm. And that's one reason no one  
21 drowned in their homes in Tropical Storm Allison.

22 Q. Would you agree that, along the coast,  
23 especially here in the Houston-Galveston area, that we  
24 not only get large amounts of rain but also high,  
25 intense amounts of rain?



1 A. Yes.

2 Q. And that that's a major factor contributing  
3 to flooding in Harris County?

4 A. Yes.

5 Q. It's the intensity that really kind of gets  
6 us, doesn't it?

7 A. Intensity and distribution across the  
8 watershed or across the county and the duration. It's  
9 several factors more than just intensity.

10 Q. Right. And what storm caused the most  
11 intense rainfall in Harris County -- anywhere in Harris  
12 County -- for the 6-, 12-, and 24-hour storm event?

13 A. Could you repeat the last part of your  
14 question.

15 Q. Sure. For the 6-, 12-, and 24-hour duration  
16 maximum rainfall, what historic storm has the highest  
17 amount for those durations in Harris County?

18 A. That's Tropical Storm Allison, June of 2001.

19 Q. Not Harvey?

20 A. Not for those intensities.

21 Q. Okay. But probably Harvey has the maximum  
22 amount of rainfall for longer durations?

23 A. That's what the data shows.

24 Q. Okay. Now, Harris County Flood Control  
25 District, after it was created, was created in part

1 as -- to be a local sponsor for the Addicks and Barker  
2 dams; correct?

3 A. Or whatever they called it back then.

4 Q. The Buffalo Bayou project?

5 A. Whatever they called it back then, not the  
6 name, but the -- a local sponsor today is different  
7 than what a local sponsor would have been back in the  
8 '40s.

9 Q. And is it the only thing Harris County was --  
10 Harris County Flood Control District was created for?  
11 Is that its only purpose?

12 A. No. I don't know the exact wording of the  
13 creation. I haven't read that document.

14 Q. Okay. But it's also created really to  
15 reclaim lands so that they could be drained and  
16 ultimately developed; correct?

17 A. I don't think it says that.

18 Q. Okay. Do you know that Harris County Flood  
19 Control District in the '50s and '60s went out and  
20 created and improved channels throughout the county?

21 A. Yes. I know that Harris County Flood Control  
22 District has done quite a bit of work to -- to channels  
23 to improve conveyance and lower flood levels.

24 Q. Okay. And for what purpose?

25 A. To reduce flood damages.

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1 Q. Well, what about for land that hasn't been  
2 developed yet?

3 A. There's undeveloped land all across Harris  
4 County.

5 Q. And Harris County --

6 A. There's probably a watershed that doesn't  
7 have developed land in it.

8 Q. But Harris County Flood Control District went  
9 out and improved channels to allow for development to  
10 occur to create depth in those channels; correct?

11 A. I'm not aware of that.

12 Q. You are not aware of that?

13 A. No.

14 Q. Okay. Do you know if developers go in and  
15 build channels so that they can create depth to put  
16 their storm sewers in?

17 A. Could you repeat that question.

18 Q. Sure. Do you know that developers and their  
19 engineers build channels to create depth so that their  
20 storm sewers can be constructed and gravity-drained  
21 into them?

22 A. Yes.

23 Q. And you know that those channels that are  
24 built by the developers then drain into Harris County  
25 Flood Control District channels?

1 A. Yes.

2 Q. Okay. And you know that, in the past, many  
3 of the drainage -- flood control district channels were  
4 originally natural bayous and creeks?

5 A. Some were, yes.

6 Q. And that some of those did not have  
7 sufficient depth to allow for development unless they  
8 were improved and deepened?

9 A. Yes, that did happen.

10 Q. Okay. And so isn't it true that the Harris  
11 County Flood Control District improved some of those  
12 channels that drain into Addicks and Barker reservoir?

13 And they exist on government-owned land.

14 A. Okay. Yes.

15 Q. Okay. And the flood control district  
16 obtained permission from the federal government to do  
17 that; correct?

18 A. Yes.

19 Q. But it was done and paid for by the flood  
20 control district?

21 A. I don't know all of them, but I know some of  
22 them. Some of them were paid for by the flood control  
23 district.

24 Q. Were they ever paid for by the Corps of  
25 Engineers or the federal government?

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1 A. I don't believe so.

2 Q. Okay.

3 MR. DUNBAR: One moment, Your Honor.

4 THE COURT: Yes.

5 MR. DUNBAR: That's all I have, Your Honor.

6 THE COURT: All right. Thank you very much,

7 Mr. Dunbar.

8 Ms. Tardiff, redirect?

9 REDIRECT EXAMINATION

10 BY MS. TARDIFF:

11 Q. Just very briefly, Mr. Fitzgerald.

12 How many subpoenas did you receive in this  
13 case?

14 A. I received two for the -- for this trial.

15 Q. One of those was from the plaintiffs?

16 A. Yes.

17 Q. And was the other one from the United States?

18 A. Yes.

19 Q. And you were not called last week by the  
20 plaintiffs pursuant to the subpoena that they issued to  
21 you; is that correct?

22 A. That's correct.

23 Q. And you stated earlier that you're not being  
24 paid for your testimony here today; correct?

25 A. That's correct.

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1 Q. You're appearing as a fact witness?

2 A. Yes.

3 Q. And you took an oath here to tell the truth;  
4 correct?

5 A. Yes.

6 Q. And you have told the truth in response to  
7 all of the questions that have been asked to you,  
8 whether it's by me or Mr. Dunbar here today; correct?

9 A. Yes.

10 Q. And did the fact that -- we had a meeting at  
11 Harris County Flood Control District offices with the  
12 flood control district's attorney a few weeks ago.

13 Did that impact in any way any of the answers  
14 that you gave here today?

15 A. No.

16 Q. To your knowledge, was -- were the  
17 plaintiffs' counsel also given an opportunity to meet  
18 with you at that time by Harris County Flood Control  
19 District's counsel?

20 A. That's what she told me, yes.

21 Q. Okay. Thank you, sir.

22 THE COURT: Mr. Dunbar?

23 MR. DUNBAR: One quick question, Your Honor.

24 THE COURT: Yes.

25 RECROSS-EXAMINATION

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1 BY MR. DUNBAR:

2 Q. When you met with defense counsel and the  
3 attorney from the Harris County Flood Control District,  
4 were you an employee of the district?

5 A. No.

6 Q. So that the lawyer for the flood control  
7 district was not your lawyer?

8 A. Not my personal lawyer, no.

9 Q. Not even representing you 'cause you were  
10 already retired?

11 A. Yes.

12 MR. DUNBAR: That's all I have, Your Honor.

13 THE COURT: May the Court excuse  
14 Mr. Fitzgerald?

15 MS. TARDIFF: Yes, Your Honor.

16 MR. DUNBAR: Yes, Your Honor.

17 THE COURT: Mr. Fitzgerald, thank you. And I  
18 take it you've been waiting a little bit to testify.  
19 Thank you for your patience.

20 THE WITNESS: No problem. Thank you.

21 THE COURT: Mr. Shapiro -- all right.  
22 Mr. Levine?

23 MR. LEVINE: Yes, Your Honor.

24 THE COURT: You have the next witness?

25 MR. LEVINE: Yes, Your Honor.

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1 THE COURT: And it is?

2 MR. LEVINE: Dr. Gerald Galloway.

3 THE COURT: Thank you.

4 Dr. Galloway, if you will stop about right  
5 there and raise your right hand to be sworn.

6 Thereupon--

7 GERALD E. GALLOWAY JR.,  
8 was called as a witness, and having been first duly  
9 sworn, was examined and testified as follows:

10 THE WITNESS: I do.

11 THE COURT: Thank you. And once you've  
12 seated yourself in the witness stand, would you state  
13 your full name for the record.

14 THE WITNESS: Gerald E. Galloway, Jr.

15 THE COURT: Thank you.

16 Mr. Levine?

17 MR. LEVINE: Thank you. Just a moment with a  
18 few.

19 May I approach with the pointer and binder?

20 THE COURT: Yes.

21 Somebody's water? Just looking what's going  
22 on behind you, Mr. Galloway.

23 Mr. Levine?

24 DIRECT EXAMINATION

25 BY MR. LEVINE:



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1 Q. Thank you, Your Honor. Dr. Galloway, please  
2 state your full name for the record.

3 A. Gerald E. Galloway, Jr.

4 Q. Okay. Where do you presently work?

5 A. I presently work at the University of  
6 Maryland in College Park, Maryland, at Texas A&M in  
7 both College Park and Galveston.

8 Q. Okay. And do you also have a consulting  
9 firm, Water Resources Professionals?

10 A. Yes. I have a limited liability corporation,  
11 Water Resources Professionals.

12 Q. Okay. And what does your work with Water  
13 Resources Professionals involve?

14 A. It involves advice, participation in studies  
15 for groups, nongovernmental organizations, and  
16 occasionally small firms that need assistance in  
17 dealing with water resource management.

18 Q. And what are your present employment duties  
19 with Maryland and Texas A&M?

20 A. I am a professor of engineering at the  
21 University of Maryland. And I'm under a three-year  
22 fellowship at Texas A&M University that allows me to  
23 work in both locations, where I'm a researcher and a  
24 teacher.

25 Over the last two years, I have concentrated

1 on the research in conducting a study of urban flooding  
2 in the United States in conjunction with Texas A&M and  
3 just teaching on a part-time basis and advising  
4 students.

5 Q. And do you have a particular research focus?

6 A. My research focus is in water resources  
7 management, flood control, flood-proneness definition,  
8 and disaster resilience as it applies to primarily the  
9 flood world.

10 Q. Does water resources management include flood  
11 risk management?

12 A. It certainly does. Water resource management  
13 is a broad category. Flood risk management is a major  
14 part of that today.

15 Q. Okay. And is flood-proneness a part of flood  
16 risk management?

17 A. Flood-proneness is a part of that.

18 Q. Okay. And when you say "flood-proneness,"  
19 what do you mean?

20 A. By flood-proneness, I mean, Your Honor, are  
21 you susceptible to being flooded. It's an interesting  
22 term because it appears in many locations, never really  
23 defined other than that term. It's the probability  
24 that a flood could occur or the susceptibility,  
25 vulnerability to flooding.

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1 Q. And what types of courses have you taught  
2 that are relevant to your work in this case?

3 A. Over the last -- primarily, my focus has been  
4 on teaching a course, 30 years, of water resources  
5 management in the broad sense.

6 I have also taught engineering design. I  
7 have taught environmental engineering. I have taught  
8 disaster management, courses focused in water  
9 resources, but in the application in flood control --  
10 flood management.

11 Q. Dr. Galloway, let's talk about your  
12 educational background. What degrees do you hold?

13 A. I have a bachelor of science in the United  
14 States Military Academy, a master's of science in  
15 engineering from Princeton University, a master of  
16 public administration from Penn State at their Capital  
17 campus in Harrisburg, a master of military art and  
18 science from the United States -- and a PhD in water  
19 resources from Chapel Hill -- the University of North  
20 Carolina at Chapel Hill in water resources.

21 THE COURT: Let's just make sure the reporter  
22 has caught up.

23 (Clarification by the reporter.)

24 THE WITNESS: I have a master of public  
25 administration from Penn State in Harrisburg, Capital

1 campus, followed by a master of military art and  
2 science, which is history and management, from the U.S.  
3 Army Management Staff College.

4 BY MR. LEVINE:

5 Q. Dr. Galloway, can you tell us about your past  
6 employment prior to your work at Maryland and Texas  
7 A&M, please.

8 A. Well, I have been in this business, Your  
9 Honor, for over 60 years. I graduated in 1957 into the  
10 Army in the Corps of Engineers and went to Europe for  
11 an initial assignment as a combat engineer, which  
12 lasted three years. I then --

13 THE COURT: Which unit?

14 THE WITNESS: Third Armored Division, sir.

15 THE COURT: Thank you.

16 THE WITNESS: And I went to Europe. I came  
17 back and I had several troop assignments since -- or I  
18 had several troop assignments, both in Germany and two  
19 tours in Vietnam. I have worked in the Corps of  
20 Engineers in the New York district and in the  
21 Pittsburgh district as the district commander.

22 I have worked in the Pentagon. I've worked  
23 in other locations. After my district assignment, I  
24 went to the military academy as a professor, became a  
25 professor of engineering, the head of department, and

1 eventually the dean of the academic board -- the chief  
2 academic officer at West Point, a position from which I  
3 retired. I then went to be the dean at the Industrial  
4 College of the Armed Forces, one of the colleges of the  
5 National Defense University.

6 From there, I was asked to join the  
7 International Joint Commission as a senior civilian.  
8 The International Joint Commission is a U.S.-Canadian  
9 commission that deals with the boundary waters we share  
10 with Canada. And did that through the -- following the  
11 great flood on the Red River of the North and assisted  
12 in our report that went to the two governments on that  
13 particular project.

14 After that, I joined a commercial firm  
15 working in the business of IT and flood risk  
16 management. We were competitors for contracts, as  
17 you've heard from -- this morning or this afternoon,  
18 from FEMA for mapmaking and flood risk management  
19 support of FEMA.

20 In 2004, I went to work at the University of  
21 North Carolina -- excuse me -- at the University of  
22 Maryland and then continued with the small corporation  
23 that I've got doing some other work.

24 BY MR. LEVINE:

25 Q. Dr. Galloway, when you retired from the U.S.

1 Army, what was your rank?

2 A. Brigadier general.

3 Q. Thank you.

4 Dr. Galloway, have you ever been tasked to  
5 work for the President of the United States?

6 A. Yes, sir, three times.

7 I was asked to become a member of the  
8 Mississippi River Commission in 1987 and was on the  
9 commission for eight years.

10 In 1993, in the midst of the great  
11 Mississippi River flood of that year, it was -- the  
12 largest, really, flood we had in the 20th century in  
13 the U.S. -- the president asked me to pick up and form  
14 a team to find out why the flood happened, what we  
15 should do about it, and what were the challenges to  
16 what we were already doing.

17 I then did that study. And then later, in  
18 1997, I was appointed by the President to the American  
19 Heritage Rivers Commission, looking at how we ought to  
20 treat rivers across the country.

21 Q. Are you a member of any relevant academies?

22 A. Yes. I am an elected member of the National  
23 Academy of Engineering, National Academy of Public  
24 Administration, and the National Academy of  
25 Construction.

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1 Q. And what types of activities have you  
2 participated in with those organizations?

3 A. The primary activity for members of those  
4 organizations is to participate in study groups that  
5 they form at the request of the government. I worked  
6 on 14 study groups, committees, at the National Academy  
7 of Engineering. I worked on five at the National  
8 Academy of Public Administration, many of which dealt  
9 with important issues dealing with water resources  
10 including, recently, one on the National Flood  
11 Insurance Program and levies, levies and how they  
12 affect the National Flood Insurance Program; one on --  
13 we completed a couple of months ago -- on disaster  
14 resilience, measuring community resilience to  
15 disasters.

16 Q. And have you chaired any of those committees?

17 A. I have chaired several of the committees.  
18 And I have also done the committees with National  
19 Academy of Public Administration dealing with flood  
20 mapping and, again, the issue of dealing with military  
21 installations and how they work with communities in  
22 cooperation in these very difficult disaster events.

23 Q. Have you done any work outside of these  
24 organizations?

25 A. Yes. Both as a college professor and in my

1 independent role, I have worked with groups like the  
2 Nature Conservancy, the World Wildlife Fund. I have  
3 worked for United States Government in going to places  
4 like Mexico to investigate flood control there and  
5 flood risk management.

6 And I have worked on major projects with the  
7 World Wildlife Fund and the government of China, which  
8 created a book on flooding in China and flooding across  
9 the world. It's called "Strategies for Flood Risk  
10 Management."

11 I've worked for the government of Singapore  
12 as an adviser on their sea level rise. Worked for the  
13 USAID as a member of an NGO, working on Mekong River  
14 climate change issues with dams and the associated  
15 issues with what happens when you have that taking  
16 place.

17 Most recently I worked in Italy, with the  
18 government of Tuscany, the City for Florence, the  
19 government of Italy on preventing flooding in the city  
20 of Florence.

21 Q. Have you been recognized by your peers?

22 A. I've received several awards. Perhaps most  
23 important to me is the election to the three academies.  
24 But I have received the -- the award -- the OPAL award,  
25 outstanding leadership over your period of service,



1 from the American Society of Civil Engineers. I have  
2 been elected as a distinguished member.

3 I have also been elected to the Golden Eagle  
4 Award in the Society of American Military Engineers.  
5 AWRA, another organization, has given me their highest  
6 award.

7 I am most proud of the Goddard-White Award.  
8 Those are two gentlemen who pioneered in flood risk  
9 management and floodplain management by the Association  
10 of State Floodplain Managers.

11 Q. Have you been published?

12 A. Yes. I have written a couple of books -- a  
13 few books, more than that, many articles for journals.  
14 But my -- my real issue has been on working on reports  
15 and items that will go to serve the public purpose. So  
16 I have a great number of those that I can claim  
17 authorship or coauthorship on.

18 Q. Can you give us some examples of work which  
19 has been published that's relevant to your work in this  
20 matter?

21 A. I mentioned, Your Honor, the work with China,  
22 the Ministry of Water Resources -- the Ministry of  
23 Water Resources, the World Wildlife Fund, sponsored by  
24 the international organization. They also -- we also  
25 had on this particular team members from other parts of

1 the world. We published a document, "Strategies for  
2 Flood Risk Management," that is universally distributed  
3 by UNESCO as one of their documents and also in the  
4 Pacific by the Asian Development Bank, at which that is  
5 one of their principal ones.

6 Recently, in the last year, we've published a  
7 book on the issues of flood risk management in  
8 Florence. It's a report on what we said was wrong in  
9 Florence, what they needed to do to deal with the  
10 problems. And that accompanies some work by the UN in  
11 trying to improve resilience of cultural organizations  
12 to disasters.

13 Q. Have you testified at trial before,  
14 Dr. Galloway?

15 A. I have not.

16 Q. Okay. Have you been retained as an expert  
17 before in litigation?

18 A. I have.

19 Q. How many times?

20 A. Once.

21 Q. But they didn't need you to testify at trial?

22 A. They didn't need me to testify.

23 Q. Have you ever been disqualified as an expert  
24 in litigation?

25 A. I have not.

1 Q. Dr. Galloway, were you retained by the United  
2 States in this matter?

3 A. I was.

4 Q. Okay. Without getting into any of your  
5 conclusions, what was your assignment in this case?

6 A. My assignment was to investigate, Your Honor,  
7 the proneness of this area, the test properties, to  
8 flooding and to examine the test properties in that  
9 light.

10 I was given two particular challenges in  
11 there. The first was to define the characteristics of  
12 flood-proneness, what it is, and then to apply those to  
13 the test properties under -- at the -- at the time of  
14 the acquisition of those properties and over time.

15 I was also asked to look at the indicators  
16 which would be information available to people who  
17 would be acquiring property at the time of their  
18 acquisition that would give them any indications of  
19 flood-proneness.

20 Q. And was that flood-proneness in the context  
21 of a Hurricane Harvey-like event?

22 A. Yes. It was at the time of acquisition for a  
23 Hurricane Harvey-like event.

24 Q. Okay. And when you say Hurricane Harvey-like  
25 event, what do you mean?

1           A.     I mean, a hurricane identical to Hurricane  
2     Harvey but at the time of acquisition. Obviously,  
3     there's some minor changes that might take place, but  
4     essentially the Hurricane Harvey.

5           Q.     What type of information did you consider?

6           A.     I was fortunate to have all of the  
7     information that's been gathered since Hurricane  
8     Harvey. I was also fortunate to have been working here  
9     in this region over this period of time since before  
10    Hurricane Harvey, a year, and to have information that  
11    I gathered in the course of the studies we were doing  
12    at Texas A&M.

13                I've had access to the -- the government  
14    information, the files they have, the literature that  
15    goes with this business of flood risk management that's  
16    in the general area and in business and commercial  
17    sense.

18                I have also been able to visit the locations  
19    of the test properties. And I've also been able to  
20    participate in professional organizations dealing with  
21    the issues connected with Harvey.

22           Q.     Did you have access to a database of  
23    materials that had been produced in this litigation?

24           A.     Yes, I have had access to that.

25           Q.     Okay. Did that include Army Corps of

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1 Engineers reports and information from Harris and Fort  
2 Bend County?

3 A. Yes, it does.

4 Q. And information from USGS and FEMA?

5 A. Yes. All of those are part of that.

6 Q. Is this the type of information that people  
7 in your field would consider for this type of  
8 assignment?

9 A. Yes.

10 MR. CHAREST: Objection, Your Honor.

11 THE COURT: Mr. Charest.

12 MR. CHAREST: Foundation. We've not actually  
13 established what field we're actually talking about  
14 here, and that's part of the issue we have with --

15 THE COURT: We'll sort it out in due course.

16 Mr. Levine.

17 MR. LEVINE: Thank you, Your Honor.

18 BY MR. LEVINE:

19 Q. I'm sorry. I don't know if we got an answer  
20 to that last question.

21 A. Would you repeat the question.

22 Q. Yes. Is this the type of information people  
23 in your field would consider for this type of  
24 assignment?

25 A. Yes. It is the stuff of which reports on

1 flood programs, flood risk management are made.

2 Q. Were you assisted by anyone in your work on  
3 this case?

4 A. I was. I was assisted by an organization  
5 called Analysis Group of Washington, D.C., and their  
6 staff in putting parts of my reporting together,  
7 gathering the information, cataloging it, geographic  
8 information services.

9 I also was assisted by a colleague of mine,  
10 Professor Jeff Brideau, who is a new PhD in history of  
11 infrastructure at the University of Maryland.

12 Q. And did you supervise their work in  
13 accordance with the standards of your profession?

14 A. I certainly did.

15 Q. Okay. And have you done similar work in your  
16 career to the assignment in this matter?

17 A. Yes, a number of times. The very -- clearly  
18 the work for the President and subsequent one on the  
19 Red River of the north that we reviewed and submitted  
20 to the two governments, other -- the report that just  
21 was completed in Italy is very similar to this, dealing  
22 with flood risk management, water resource management,  
23 combination, and looking at the causes in the futures.

24 Q. I'm sorry. The causes of flooding?

25 A. Yes. The causes of -- all of these contain

1 issues that dealt with a flood having occurred, what  
2 could you do about it, what are the causes of that  
3 flood, what are the issues that must be addressed in  
4 dealing with this.

5 Q. Okay. Did you use a methodology to help  
6 answer the question in your assignment?

7 A. I certainly did.

8 Q. Is that methodology provided in your report?

9 A. It is.

10 Q. Can you explain that methodology for us.

11 A. Your Honor, it started with defining  
12 flood-proneness and identifying two features,  
13 characteristics -- those things that are natural items,  
14 factors that would be considered as you look at this,  
15 such things as topography; and then indicators, which  
16 are information that would be available about the  
17 source of the flood, the location, information about  
18 who is damaged, how, all of those sorts of features.

19 We then -- I then took those and examined  
20 each in the context of the test properties and then  
21 made conclusions as to the relative flood-proneness of  
22 the test properties and, in general, the Houston area  
23 and the watersheds here to flooding.

24 Q. And did you also consider if those indicators  
25 were available to property owners at the time they

1 purchased their property in the context of a Hurricane  
2 Harvey-like event?

3 A. Yes. Were the indicators available? How did  
4 they appear? Where would they have found them? And  
5 how would they be put to use?

6 Q. Why is the context of a Hurricane Harvey-like  
7 event important?

8 A. I'm sorry. I didn't --

9 Q. Why is the context of a Hurricane Harvey-like  
10 event important?

11 A. I'm not sure I understand the context.

12 Q. Sorry. The context of a Harvey-like storm.

13 A. Oh, why is -- well, the context of a  
14 Harvey-like storm is it is one that has occurred. We  
15 know that that is a significant event of a magnitude  
16 previously cited as being unequaled.

17 And, therefore, the challenge of looking at  
18 the proneness to flooding is dependent on the hazard  
19 that you're facing. In this particular case, a  
20 Hurricane Harvey-like event is that hazard.

21 Q. Did you develop the characteristics and  
22 indicators that are part of your methodology?

23 A. I did. But I did in the sense that they're  
24 common ones in the world in which I operate and have  
25 operated for 60 years.



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1 Q. Sorry. Did you develop them, or did you use  
2 the ones that are typically in in practice?

3 A. I developed them in the sense that I pulled  
4 them out of the shelf of characteristics and indicators  
5 that have been used over the -- this time period by  
6 professionals in my field and that I have used  
7 personally in many reports and other activities --  
8 professional activities.

9 Q. So did you derive these from somewhere?

10 MR. CHAREST: Objection.

11 THE COURT: Mr. Charest.

12 MR. CHAREST: It's consistently leading. So  
13 I'm going to have to raise an objection and ask the  
14 witness testify, not the lawyer.

15 THE COURT: We'll take that.

16 You're allowed the question.

17 BY MR. LEVINE:

18 Q. I'm sorry. The question was did you derive  
19 these from somewhere, this information.

20 A. The characteristics and indicators are  
21 derived from my professional experience. They're  
22 derived from the literature that is common in the  
23 field. They're derived from reports similar to this  
24 that are being produced all around the world.

25 Q. Is this information that's typically

1 considered in your field of work?

2 A. Yes.

3 Q. Dr. Galloway, as we addressed your assignment  
4 and your expert conclusions, would it be helpful for  
5 you to refer to the expert report you prepared for this  
6 case?

7 A. It would.

8 MR. LEVINE: Okay. Your Honor, I'd just like  
9 to take care of a little bit of housekeeping here.

10 THE COURT: Yes.

11 MR. LEVINE: Okay. The exhibit number is  
12 DX609. The exhibit that's been provided in the binders  
13 is 609R because there were some redactions due to  
14 privacy information. We're not going to have to clear  
15 the courtroom today. We're just not going to publish  
16 any information on the screen that would be considered  
17 privacy act and subject to the protective order in this  
18 matter.

19 THE COURT: What is the nature of the  
20 information that has been redacted?

21 MR. LEVINE: It relates to NFIP data,  
22 national flood insurance data.

23 THE COURT: Why is that subject to the  
24 privacy act?

25 MR. LEVINE: If -- if it -- if it shows,

1     like, particular addresses and things like that. We  
2     have -- we have some graphics, Your Honor. I'll just  
3     proffer what this is. We have some graphics that plot  
4     the locations of where people have policies. So we  
5     just don't want to put that on the screen. But what I  
6     do have is separate copies of the report for you, your  
7     clerk, opposing counsel that have the unredacted  
8     information so that you can view it. When he testifies  
9     to it, it won't get into the specifics of the  
10    information that's private that should not be published  
11    on the screen.

12               THE COURT: There's nothing about the  
13    information subject to the privacy act that, I take it,  
14    would be pertinent to a decision in this case; is that  
15    correct?

16               MR. LEVINE: No, Your Honor. I think that's  
17    correct, yes.

18               THE COURT: All right. Mr. Charest, are you  
19    familiar with this exercise?

20               MR. CHAREST: Not at all, to be honest with  
21    you. It sounds -- I'm happy to use the redacted  
22    version. That's fine with me.

23               THE COURT: Let's do that.

24               MR. LEVINE: If it's okay, Your Honor --

25               THE COURT: Yes.

1 MR. LEVINE: -- we've prepared unredacted  
2 versions, and we also have tabs that are several  
3 appendices. The versions that are in the binders don't  
4 have the tabs. This will make it a little bit easier  
5 to go through the material.

6 THE COURT: All right.

7 MR. LEVINE: May I approach?

8 THE COURT: Yes.

9 MR. LEVINE: Thank you.

10 THE COURT: Just make sure that Mr. Charest  
11 and his colleagues have the same thing.

12 MR. LEVINE: Yes, sir, Your Honor. And the  
13 witness has a binder with the same thing.

14 THE COURT: Thank you.

15 MR. LEVINE: Additionally, Your Honor, when  
16 Dr. Galloway did his report, he did it in both the  
17 upstream and downstream subdockets. The report  
18 contains appendices for several -- for all of the test  
19 properties in both upstream and the downstream dockets  
20 when that's okay. I'm going to address that. The  
21 report -- the appendices for the downstream properties  
22 have been taken out of the copy I have just provided to  
23 you and to counsel.

24 THE COURT: Thank goodness.

25 MR. LEVINE: Yes. Yes, Your Honor. We did

1 not intend to offer that. When the documents were  
2 exchanged prior to trial, the downstream test  
3 properties were still in there, and we do not intend to  
4 put that on.

5 THE COURT: Is there anything in the text of  
6 Dr. Galloway's report that refers to the downstream  
7 investigation or analysis that he made?

8 MR. LEVINE: As Dr. Galloway indicated when  
9 he was walking us through his methodology, he did look  
10 at the Houston region in general. So he does talk  
11 about the Houston region in general in portions of the  
12 report. But the information related to the downstream  
13 properties is in the appendices which we have taken  
14 out.

15 THE COURT: Mr. Charest.

16 MR. CHAREST: It's a single report for both  
17 cases. By the caption, you can see it. So it's not  
18 aimed at the upstream or the downstream. The  
19 appendices are test properties-specific, but the  
20 analysis and the methodology says it is. It's the same  
21 both ways.

22 THE COURT: Thank you, Mr. Charest.

23 Mr. Levine, we'll try to sort it out.

24 MR. LEVINE: I think, as we go through it,  
25 Your Honor, you'll find that we're not putting on

1 evidence regarding the downstream test properties.

2 THE COURT: Thank you.

3 MR. LEVINE: Thank you, Your Honor.

4 BY MR. LEVINE:

5 Q. So, Dr. Galloway, I've placed --

6 THE COURT: Let me just comment. I think the  
7 legal issues associated with upstream are very  
8 different than those associated with the downstream.  
9 Let's just leave it at that. Now, I might think that;  
10 others may not. And I fully understand that.

11 Let's -- let's proceed.

12 MR. LEVINE: Thank you, Your Honor.

13 BY MR. LEVINE:

14 Q. Dr. Galloway, on the screen I'm placing a  
15 document.

16 What is this document?

17 A. That's my expert report.

18 Q. And did you prepare it?

19 A. I prepared it.

20 MR. LEVINE: Okay. Your Honor, additionally  
21 I'd like to introduce JX290, which is also at the back  
22 of the package of materials. And JX290 are ten  
23 replacement pages. Some of the figures in the upstream  
24 appendices. Just we had the wrong figures. So at the  
25 time of Dr. Galloway's deposition, we produced these

1     ten replacement pages to plaintiffs' counsel.

2                   So I just wanted you to know that that was  
3     included in -- in the overall discussion.

4                   THE COURT:   Just a moment.

5                   MR. CHAREST:  Those are the packet you gave  
6     me, Brad?

7                   MR. LEVINE:  They should be.

8                   THE COURT:  What was that?

9                   MR. CHAREST:  I'm trying to get oriented as  
10    well, sir, with what's going on.

11                  MR. LEVINE:  Sorry.  So in the packet that I  
12    provided to both you and counsel should be DX609, which  
13    is Dr. Galloway's report.  Additionally, at the back of  
14    the packet JX290, which are just ten figures which are  
15    replacements to the report.

16                  THE COURT:  Thank you.

17                  MR. LEVINE:  Thank you, Your Honor.

18                  THE COURT:  Let me just --

19                  MR. LEVINE:  Take your time, Your Honor.

20                  THE COURT:  I'm sensitive to time in this  
21    case.

22                  MR. LEVINE:  Certainly, Your Honor.

23                  MR. CHAREST:  Were these given during the  
24    deposition?  Is that what you're saying?

25                  MR. LEVINE:  No.  They were produced at the

1 time of the deposition. Y'all have had those since --

2 I believe it was around Christmastime.

3 MR. CHAREST: Thank you.

4 THE COURT: All right. Thank you.

5 MR. LEVINE: Thank you, Your Honor.

6 BY MR. LEVINE:

7 Q. Okay. Dr. Galloway, does this report fairly  
8 and accurately describe your work in this case?

9 A. It does.

10 Q. Okay. And does your report include your CV  
11 in Appendix A, and is it representative of the  
12 education, experience, and qualifications that you  
13 described for us?

14 A. It does.

15 Q. Does your report identify the materials that  
16 you relied upon in footnotes as well as in Appendix B?

17 A. It does.

18 Q. Okay. Does it include a discussion of your  
19 methodology?

20 A. It does.

21 Q. Okay. Does it include a summary of your  
22 opinions?

23 MR. CHAREST: Objection. Leading. I mean --

24 THE COURT: Sustained.

25 BY MR. LEVINE:



1 Q. Are your opinions stated in the report?

2 A. They are.

3 MR. CHAREST: Leading, sir, still.

4 THE COURT: I'll not comment.

5 Mr. Levine, let's just go forward.

6 BY MR. LEVINE:

7 Q. Are your opinions stated in the report?

8 A. Yes.

9 Q. And do you hold the opinions expressed in the  
10 report to a reasonable degree of professional  
11 certainty?

12 THE COURT: Mr. Charest.

13 MR. CHAREST: It's still leading. I don't  
14 know how better to say the objection. He's leading and  
15 has been and hasn't asked a nonleading question in,  
16 like, 20 questions.

17 THE COURT: All right. Let's just put it  
18 this way. The Court tries to make sure that Rule 702,  
19 especially, is applied. And we'll deal with Rule 703  
20 as well, but I don't think these questions -- well,  
21 I'll not comment.

22 Go ahead, Mr. Levine.

23 BY MR. LEVINE:

24 Q. Do you hold your opinions to a reasonable  
25 degree of professional certainty?

1           A.     Yes.

2                   MR. LEVINE:   Your Honor, pursuant to  
3   Rule 702, I'm offering Dr. Galloway as a qualified  
4   expert witness in the fields of water resource  
5   management --

6                   THE COURT:   Just --

7                   MR. LEVINE:   -- and flood risk management.

8                   THE COURT:   Just a moment.

9                   MR. LEVINE:   Yes, Your Honor.

10                  THE COURT:   Flood risk.

11                  MR. LEVINE:   Water resource management and  
12   flood risk management.

13                  THE COURT:   Thank you.

14                  MR. LEVINE:   And I also offer DX609 and JX290  
15   into evidence.   I understand you'll --

16                  THE COURT:   Reserve.

17                  MR. LEVINE:   -- reserve.

18                  THE COURT:   Not even close.   We're still at  
19   voir dire here.

20                  Mr. Charest, do you have voir dire?

21                  MR. CHAREST:   Yes, sir.   Thank you.

22                                 VOIR DIRE EXAMINATION

23   BY MR. CHAREST:

24           Q.     General, first thank you for your service,  
25   and that's an impressive résumé.

1                   You have been in the field of flood risk for

2   60 years; correct?

3           A.    Correct.

4           Q.    And have you ever been accepted by a court as

5   an expert to testify before today on the subject

6   matters that you're offering today?

7           A.    I am not sure if my previous litigation had

8   me accepted as an expert.

9           Q.    Right. Well, you -- Mr. Levine asked you

10   about the prior experience, and you told us, the Court

11   and everybody, that they didn't need you; right?

12          A.    They didn't need me.

13          Q.    Right. Did they tell you they didn't need

14   you because you got stricken, sir?

15          A.    No.

16          Q.    Were you, in fact, stricken, sir, as an

17   expert in that case?

18          A.    Stricken?

19          Q.    Yes, sir.

20          A.    No.

21          Q.    What case was it, sir?

22          A.    I'll have to get the exact title.

23          Q.    Was it federal, Mobil Corporation?

24          A.    Yes.

25          Q.    In the Eastern District of Michigan?

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1 A. Right.

2 Q. And is your testimony here under oath that  
3 your opinions were not stricken?

4 A. Not to my knowledge.

5 MR. CHAREST: Matt, put up the case, please.

6 Yeah, zoom into the top right-hand paragraph, please.

7 Up there. Yep. Above the facts, above the facts.

8 BY MR. CHAREST:

9 Q. "The motion to exclude the reports and  
10 testimony of Gerald Galloway are granted."

11 Did I read that correctly, sir?

12 A. I have never seen this.

13 Q. Okay.

14 Can you first show me the caption, Matt, just  
15 to make sure we're on the same page as to what case  
16 we're talking about.

17 Is that the case that you were offered as an  
18 expert, sir, and were stricken?

19 A. If that's what stricken is, yes.

20 Q. Thank you. And that's your only other time  
21 to be offered as an expert in a court case; correct?

22 A. Right.

23 Q. You were asked by the government to determine  
24 what indicators --

25 THE COURT: Mr. Charest, may I ask several

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1 questions --

2 MR. CHAREST: Please.

3 THE COURT: -- of Dr. Galloway?

4 Did you actually testify in court in that  
5 case?

6 THE WITNESS: I did not.

7 THE COURT: Was this an in limine -- do you  
8 know what an in limine motion is, Dr. Galloway?

9 THE WITNESS: No, I don't, Your Honor.

10 THE COURT: Mr. Charest, was this on in  
11 limine motions?

12 MR. CHAREST: I don't honestly know, Your  
13 Honor. I just found out recently. I think it was -- I  
14 thought it was a Daubert challenge.

15 THE COURT: You think it was what?

16 MR. CHAREST: I thought it was a Daubert  
17 challenge because the discussion talks about fit, but  
18 that's all I can tell you, sir.

19 THE COURT: Well, a Daubert challenge can  
20 arise with in limines.

21 MR. CHAREST: Yes, sir.

22 THE COURT: Did you appear at a hearing in  
23 that case, Dr. Galloway?

24 THE WITNESS: Your Honor, I appeared at -- I  
25 gave a deposition. The deposition went to the court.

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1 And I don't know what --

2 THE COURT: You don't know what happened?

3 THE WITNESS: I did not.

4 THE COURT: All right. Thank you.

5 Mr. Charest, sorry to interrupt. Go ahead.

6 MR. CHAREST: No worries at all, sir.

7 BY MR. CHAREST:

8 Q. I understand, sir, that you've been offered  
9 as an expert in water resource management; correct?

10 A. Yes.

11 Q. And flood risk management; correct?

12 A. Correct.

13 Q. Are, within those two management-level  
14 subject matters, whatever they actually are, found the  
15 skill set of determining flood-proneness?

16 A. Yes.

17 Q. Which one? Which of those two areas of work  
18 involve the determination of whether something is  
19 flood-prone or not?

20 A. In water resource management.

21 Q. Okay.

22 A. And it's an integral -- flood-proneness is an  
23 integral part of flood risk management.

24 Q. So -- so both, then, sir?

25 A. They're both.

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1 Q. All right. And both of them involve  
2 determining flood-proneness of a particular location;  
3 is that right?

4 A. Yes.

5 Q. All right. I'm curious about the methodology  
6 that you employed here. And I'm going to try and  
7 understand it the best I can, and you can tell me if  
8 I'm wrong.

9 You look at facts and data around the  
10 neighborhood and learn and identify -- you call them  
11 indicators; right?

12 A. Indicators normally don't apply to the  
13 neighborhood; they apply to a broader area.

14 Q. Okay. Leave aside the neighborhood. You go  
15 to a geographical area and identify, with your 60 years  
16 of experience, indicators that, to you, indicate that  
17 the area is flood-prone; right?

18 A. As -- yes, if it's in a FEMA special flood  
19 hazard area, that's an indicator.

20 Q. That's not my question. I'm trying to  
21 understand how you do your job, because one of the  
22 things we have to do here is make sure that what you're  
23 doing is scientifically sufficient and reliable for the  
24 judge to allow into the record.

25 You understand?

1           A.    I certainly understand.

2           Q.    All right.  So the first step is to identify  
3   indicators through your eyes and in the application of  
4   your 60 years of experience in flood risk management;  
5   correct?

6           A.    I am giving -- offering indicators in my  
7   methodology that have been in use over the years by  
8   myself and other professionals in the conduct of such  
9   similar studies.

10          Q.    All right.  I'm not asking you where you  
11   found your list of indicators.

12          A.    Right.

13          Q.    I'm asking you the methodology by which you  
14   applied that list.  What do you do with that list?  Do  
15   you go into the street and look for culverts?  What --  
16   how do you apply that information?

17          A.    You can obtain -- since -- if you see --  
18   you'd have seen the list of indicators.  If you take  
19   that list of indicators, some of them -- when I am  
20   saying one indicator is media, availability of  
21   information about flooding, the logical place to find  
22   that is in the newspapers, in documents, in reports,  
23   public meetings, those sorts of things.

24                   And where do I look for them?  I look for  
25   them in the reports of agencies, as I've cited.  I look



1 for them in the entire issue of dealing with the  
2 subject of the project that's being evaluated or  
3 discussed. And I could go through each of the  
4 indicators -- that's really what the methodology  
5 explains -- and tell you where you'd get that  
6 information.

7 Q. But that's -- that's -- I'm sure we'll be  
8 hearing about that if this -- if it happens, from your  
9 counsel.

10 But more importantly to my question is you  
11 take a list as developed by experts of what will  
12 indicate flood-proneness, and you, with your 60 years  
13 of experience, go out and look to find these data and  
14 these information and compile them -- right? -- as to  
15 each location; correct?

16 A. That's correct.

17 Q. All right. And you, with your 60 years of  
18 experience, evaluate these different data points and  
19 determine, in my view, this area is flood-prone;  
20 correct?

21 A. With a reason for that.

22 Q. Sorry?

23 A. With a reason -- giving a reason for that.  
24 I -- it's not a yes or no; it's a yes or no based on  
25 the evidence that I see and comment on.

1 Q. Right. But, fundamentally, it's your  
2 interpretation of facts and data and your value  
3 judgment that, yes, it's flood-prone or, no, it's not  
4 flood-prone; correct?

5 A. It's -- would you state that again.

6 Q. Okay. You go, take your list, you do your  
7 search, then you -- Professor Galloway, Dr. Galloway,  
8 General Galloway -- say, "I believe this area is  
9 flood-prone or I believe it's not flood-prone; right?

10 A. That's correct.

11 Q. Okay. So it's all your analysis in your  
12 head; correct?

13 A. It's on paper. It's -- it's what you do when  
14 you prepare any kind of a report. You lay out the  
15 facts, you lay out the reasons for the facts, and then  
16 you make a judgment. And that's what I have done in --  
17 in my career. In signing environmental impact  
18 statements, all of it comes down to eventually having  
19 to make a judgment. It's not necessarily binding.

20 Q. It's either flood-prone or not flood-prone;  
21 right? It's always binary; right?

22 A. Well, it ultimately is, in this case, binary.  
23 You'd make an end judgment on each, yes.

24 Q. And that judgment -- it's you making that  
25 judgment; correct?

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1           A.     Well, I would argue that it is -- the  
2     information that I am providing leads to that  
3     presentation.

4           Q.     But you're the one that signs up and down,  
5     not anybody else?

6           A.     I'm the ultimate decider, yes.

7           Q.     Not an analysis group who did all the work?

8           A.     Right.

9           Q.     It's you?

10          A.     Excuse me?

11          Q.     It's not an analysis group who did all the  
12     gathering; it's you that makes the decision. Right?

13          A.     I'm not sure that I -- I'm not sure an  
14     analysis group did all the work.

15          Q.     Okay. It's you that makes the decision, not  
16     an analysis group; right?

17          A.     I make the decision.

18          Q.     How can I know, as an objective observer of  
19     your work, that you've got it right? How can I test  
20     your application of these data to your reason to get a  
21     conclusion?

22          A.     Well, you could compare them to the similar  
23     projects that are going on. You could compare it to  
24     similar works that are taking place where analyses are  
25     made, where -- the world is full of environmental

1 impact statements that are based on the judgment of  
2 maybe one person or two person -- two people that have  
3 made them, others that are putting them together. That  
4 all is an accumulation and presentation of facts and  
5 information and a decision made on the basis of that  
6 with a reason therefor.

7 Q. So I'm supposed to look at -- I'm supposed to  
8 take this same information and find other works, maybe  
9 by the Corps or FEMA or NFIP, where they determined  
10 flood-proneness and apply it like that; is that right?

11 A. No. I think that each report that is done on  
12 an engineering project or an engineering analysis or a  
13 general analysis of a flood kind of an event is  
14 independent of all the others. But the methodology --  
15 the consideration of basic characteristics and the  
16 consideration of these particular indicators is common.

17 And you will see those put together in a form  
18 similar to this that says, given this amount of  
19 information, you can make a judgment as to the flood  
20 vulnerability of an area and the flood-proneness of an  
21 area and make those kinds of decisions.

22 Q. Flood-proneness is not a term that's used by  
23 the Corps of Engineers, is it?

24 A. It certainly is used by the Corps of  
25 Engineers. It's -- and it's used by other federal

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1 agencies. It's not defined. It's accepted that that's  
2 what it means.

3 Q. So maybe -- maybe we talked past each other.

4 Flood-proneness is not defined by the Corps  
5 of Engineers, is it, sir?

6 A. You're correct.

7 Q. And flood-proneness is not a term used by  
8 FEMA, is it, sir?

9 A. It's a term used by both the Corps of  
10 Engineers and FEMA. Neither defines the term; both use  
11 it extensively.

12 Q. So how can I look at either one of those  
13 sources and know what it means if neither is defining  
14 it?

15 A. Well, in this particular case, both of those  
16 organizations -- the Bureau of Reclamation and  
17 others -- use the term "flood-proneness" as a term  
18 that's accepted as the propensity, the vulnerability of  
19 flooding. They use it and say it's something that's  
20 flood-prone. They use it in other cases like that.  
21 There is not a federal regulation definition of  
22 flood-proneness.

23 Q. Right. And it's not a term that's used or  
24 defined in the NFIP program right?

25 A. I'm sorry?

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1 Q. It's not a term that's defined or used in the  
2 NFIP?

3 A. It is used in almost all of the NFIP  
4 documents.

5 Q. Does the NFIP define flood-proneness?

6 A. It does not.

7 I said both -- neither the Corps nor FEMA has  
8 a CFR definition.

9 Q. And then the term as you use it is adapted  
10 from multiple sources, which I think we're hearing here  
11 today, but has no antecedent source; correct?

12 A. The antecedent source is the literature of  
13 flood activity over the last 60 years.

14 Q. So it does have an antecedent source or does  
15 is not, sir?

16 A. The antecedent source is the burden of its  
17 use.

18 Q. Sir, do you remember giving a deposition in  
19 this case?

20 A. Yes, I do.

21 Q. Do you remember saying that there was no  
22 antecedent source to this term?

23 A. I'm saying now that there is no -- I've  
24 already said there's no CFR definition to this.

25 Q. I just asked you whether there was an

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1 antecedent source for this term, and you said yes;  
2 whereas, in your deposition, you said no. Right, sir?

3 A. I'd have to look at my deposition.

4 Q. Okay. Let's do that.

5 Matt, I want to look at lines 25 -- sorry.

6 Page 25, lines 20 to 26.

7 THE COURT: Mr. Levine?

8 MR. LEVINE: Objection. Improper  
9 impeachment.

10 THE COURT: That's true. Have you asked  
11 exactly or almost exactly the same question,  
12 Mr. Charest?

13 MR. CHAREST: I will do it that way exactly.

14 BY MR. CHAREST:

15 Q. Sir, did you create --

16 MR. LEVINE: I'm sorry. Can I get a page and  
17 line, please.

18 MR. CHAREST: 25/20 to 26/01.

19 THE COURT: I didn't hear, Mr. Charest.

20 MR. CHAREST: He wanted a page, sir, for the  
21 impeachment.

22 MR. LEVINE: I'm sorry, Your Honor. Can I  
23 get a page and line, please.

24 THE COURT: Yes. Why don't you look at it  
25 before we put it up on the screen, please.

1 MR. CHAREST: 25/20 to 26/01.

2 THE COURT: Let's not put it up on the  
3 screen.

4 BY MR. CHAREST:

5 Q. Sir, did you create that definition, or did  
6 you take it from some other source?

7 A. What definition?

8 Q. The definition of flood-proneness, sir.

9 A. No. I -- I have said flood-proneness is a  
10 general term in use in the profession.

11 Q. Is there an antecedent source to that term,  
12 sir?

13 A. What do you mean by an antecedent source?

14 Q. I'm quoting you from the deposition when you  
15 said there's no antecedent source. So I guess I have  
16 to ask you what you mean by antecedent source, sir.

17 A. Well, antecedent source means I would go to  
18 the CFR and find it.

19 Q. And there is none; right?

20 A. What?

21 Q. And there is no definition like that, is  
22 there, sir?

23 A. I said that.

24 Q. The methodology that you articulate in Roman  
25 numeral III of your report, which you described briefly



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1 with Mr. Levine, is a methodology that you have never  
2 used before to evaluate the test property location;  
3 correct?

4 A. Are you saying I've never used it to -- to --  
5 on these test properties?

6 Q. No, on a test property-like situation.

7 A. I've used this methodology and been part of  
8 it in the preparation of numerous reports, evaluating  
9 the results of major flood events, looking at the  
10 issues in the Arno River in Florence, defining and  
11 looking at how people are dealing with these very same  
12 issues.

13 I am using the same methodologies that are  
14 used there and in numerous other reports, where you  
15 have to deal with the physical attributes of a flood  
16 situation and the social and cultural aspects of that.

17 Q. Sir, this methodology that you articulate in  
18 Roman numeral III of your report, is this  
19 methodology -- is this a methodology that you have ever  
20 used before on a test property-like situation?

21 A. Define a test property-like situation.

22 Q. Like what we're doing right here in this  
23 case, sir.

24 A. Well, I define this case -- I would say used  
25 in a case of evaluating properties for their proneness

1 to flooding, the possibility that they would flood --  
2 flood. And, in my particular case, the use of the  
3 analysis that leads to a definition of whether there is  
4 a necessity for or a federal interest, for example, in  
5 the federal government supporting a project.

6 I have done numerous projects, reviewed  
7 numerous projects, that have followed this same general  
8 outline and dealt with these kinds of situations.

9 Q. I don't think you answered my question,  
10 because I asked you about using it in a test  
11 property-like situation, like in this case.

12 What's the answer to that question, sir?

13 THE COURT: Mr. Levine?

14 MR. LEVINE: Objection, Your Honor. Asked  
15 and answered.

16 MR. CHAREST: Not answered.

17 THE COURT: It's about the second time.  
18 Maybe it's the third, but I don't know if it's been  
19 answered yet.

20 MR. CHAREST: That's exactly right, sir. He  
21 has not answered it.

22 THE WITNESS: Well, you're giving your  
23 definition of a test property situation, looking for my  
24 answer to that.

25 I am saying that my definition -- or my

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1 acceptance of your test property definition is the  
2 evaluation of properties that are in a flood --  
3 potential flood hazard zone and what are the  
4 characteristics and indicators that allow people to  
5 determine whether or not that's the case.

6 BY MR. CHAREST:

7 Q. Sir, I'm quoting you from your own deposition  
8 when you use the term "test property situation." Okay?

9 So let me -- I'm going to ask it the best I  
10 can one more time. And if I don't get an answer, I  
11 have to put the impeachment up. So here we go.

12 So this methodology that you articulated --

13 THE COURT: Slow down.

14 MR. LEVINE: I'm sorry, Your Honor. Can I  
15 get a page and line.

16 MR. CHAREST: 81/17 to 81/20.

17 We -- Your Honor --

18 BY MR. CHAREST:

19 Q. Do you remember giving a deposition in this  
20 case, sir?

21 A. I'd like to see it.

22 Q. Okay. Great.

23 Put it up, please, Matt.

24 THE COURT: No. We're not going to do that.

25 MR. CHAREST: Your Honor -- okay. All right.

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1 THE COURT: I'm sorry.

2 MR. CHAREST: Yes, sir.

3 THE COURT: I am not going to raise my voice,  
4 but I am going to say no.

5 MR. CHAREST: Yes, sir, Your Honor.  
6 Understood.

7 THE COURT: Thank you.

8 BY MR. CHAREST:

9 Q. This methodology that you articulate in Roman  
10 numeral No. III of your report, sir, is a methodology  
11 that you have never used before in a test property  
12 situation; correct?

13 A. I -- I'm -- either asking me if I'm using a  
14 test property situation, I've never been in a position  
15 where I have looked at 13 specific test properties in  
16 Houston, Texas.

17 Have I looked at properties that are -- have  
18 been flooded to analyze whether or not there is action  
19 that should be taken? Yes.

20 Q. So you've never done this -- let's start  
21 within Houston, I guess; right?

22 A. Right.

23 Q. And does it change because we're in Houston,  
24 or does it change because it's a test property  
25 situation and you're dealing with specific properties

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1 and trying to opine on that?

2 A. I'm trying to understand, I guess, what you  
3 mean by a test property situation. Do you mean an  
4 evaluation of the proneness of flooding of property?

5 Q. I'm using your own words, so I don't know how  
6 better to define it other than in this case --

7 A. Well, I want to see my own words.

8 Q. I'd love to.

9 A. Okay.

10 THE COURT: Mr. Levine, may we show parts of  
11 the deposition transcript?

12 MR. LEVINE: Sorry?

13 THE COURT: I'm asking the question.

14 MR. LEVINE: Yes, Your Honor, I understand.

15 That -- the question that counsel asked was  
16 not the exact same wording.

17 THE COURT: Well, it might not be the same  
18 words, but I want to make sure it's the same question  
19 as asked. Whether it uses precisely the same words or  
20 not is not a issue.

21 MR. CHAREST: May we show it? I think I have  
22 established a foundation.

23 MR. LEVINE: It was a similar question.

24 THE COURT: I'm sorry?

25 MR. LEVINE: It was a similar question.

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1 THE COURT: It was a similar question?

2 MR. LEVINE: Yes, Your Honor.

3 THE COURT: All right. I think we've gone  
4 far enough we can show the question.

5 MR. CHAREST: Thank you, sir.

6 BY MR. CHAREST:

7 Q. So this methodology that you articulate in  
8 Roman numeral III of your report, sir, is this a  
9 methodology that you have ever used before?

10 "ANSWER: On a test property-like  
11 situation, your words, the answer is no."

12 Was that true then?

13 A. Well, in the context of what we were talking  
14 about, the test property-like situation is where you  
15 are evaluating 13 --

16 Q. Can you answer my question.

17 Was that true or not when you said it?

18 A. It depends on how I define test property-like  
19 situation. My answer is no. That's correct.

20 Q. So it was true then and it's true now that  
21 you've never used this methodology in the circumstances  
22 we find ourselves today; right?

23 A. I -- I have never used this methodology to  
24 evaluate 13 properties with a view towards making this  
25 particular judgment under these circumstances.

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1 Q. Thank you, sir.

2 Your flood-proneness evaluation is not a  
3 peer-reviewed methodology, is it, sir?

4 A. I'm not sure that -- I would not agree. I  
5 think that the approach shown in the methodology, the  
6 steps taken and the indicators and characteristics  
7 mentioned, are in fact common and are the ones used in  
8 carrying out analyses of flood projects.

9 Q. Yeah, that's a different answer. Common and  
10 used in the industry is one thing. Have they been  
11 peer-reviewed, sir, your methodology that you're  
12 talking about?

13 Sir?

14 A. I have not, nor did I feel it necessary to  
15 take what is called a common approach to dealing with  
16 this situation and have it peer-reviewed. I don't know  
17 why or how I would do that.

18 Q. Has your approach and your methodology been  
19 tested in any manner?

20 A. The methodology is -- the general methodology  
21 that I've applied in many studies, and it has been  
22 tested in the results of those studies.

23 Q. But not the methodology here because you've  
24 never done it before; right?

25 A. I've never done it in Houston before.

2520

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1 Q. Not just here in Houston, but in testing of  
2 test property circumstance, you've never done it  
3 before?

4 A. I'm afraid that you are limiting the  
5 methodology to test properties, whereas this is a  
6 methodology that is applied in this case to test  
7 properties but is common in the use of analyzing  
8 flood-proneness and -- and flood-related activities in  
9 analyzing the future actions in dealing with the flood  
10 situation.

11 Q. How, if at all, can a neutral body determine  
12 the error rate of your analysis in your work here?

13 A. You'd have to explain to me what you mean by  
14 the error rate.

15 Q. So there are 13 test properties in this case  
16 for the upstream, anyway; right? Correct?

17 A. Yes.

18 Q. And for 13 out of 13 you said you think  
19 they're flood-prone; right?

20 A. Correct.

21 Q. How do we know that all 13 were correct? Is  
22 there another way to check other than just asking you?

23 A. Other than ask me?

24 Q. Yes, sir.

25 A. Have another body look at these and make the



1 same judgments that I did.

2 Q. Then is there a way to measure the quality of  
3 that work that you've done at all? Or do we just have  
4 to believe you?

5 A. Well, I think that you have to take, in this  
6 sort of a situation -- and I am going back to my  
7 Florence situation. The prime minister of Italy takes  
8 a report and reads it. He doesn't send it out for  
9 other people to comment on. He looks at it and makes  
10 his judgment based on the people who prepare it and the  
11 approach taken.

12 I believe the approach taken here is a common  
13 methodology and that how do you judge that is up to the  
14 person that's looking at that.

15 Q. A common methodology except for as applied in  
16 test property situation; right?

17 A. No. It's a common methodology applied to  
18 flood issues that have occurred in the case of previous  
19 flooding of the location and what is behind that.

20 Q. For each one of the test properties, you fill  
21 out a form that make up the appendices; correct?

22 A. Yes.

23 Q. And you created that form for this case?

24 A. I did.

25 Q. And you've never used that form in any of

1 your other methodologies or the application of this  
2 methodology before this case; correct?

3 A. That's correct.

4 Q. And that was how you set out your -- your  
5 reasoning for each one of the test properties, was  
6 identifying these different factors and running through  
7 the checklist; is that right?

8 A. That's correct. And that's what I have done  
9 in studies. It's a different format but simply here to  
10 make ease in comparison.

11 Q. Your flood-proneness evaluation did not  
12 attempt to assess any quantitative aspects of  
13 flood-proneness; right? It's binary flood-prone or  
14 not; right?

15 A. Explain what you mean by "quantitative."

16 Q. Well, all right. I'll make up an example.  
17 When I was first having a baby, I learned about an  
18 Apgar score. Are you familiar with that?

19 So you look, like, the color of the baby, how  
20 active they are, and there's more. Each one gets one  
21 or two or three points, and then you add them together.  
22 And after a certain number, they go the baby is healthy  
23 or she's not healthy or however it falls in that  
24 spectrum.

25 So the notion of grading things with a

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1 numerical value and adding them together and then  
2 seeing how they fit.

3 Are you with me?

4 A. I am with you.

5 Q. Did you do anything like that here, sir?

6 A. I did not. And I have been teaching in that  
7 field of multiattribute decision modeling and have  
8 learned that there are times when that may be useful  
9 and times when that is a dodge or a cover, gives you no  
10 certainty any more than the binary.

11 Q. So you could have done it in a manner that  
12 allowed gradation but did not; is that right?

13 A. I am not sure. In this case I determined,  
14 after looking at it, that it would be more appropriate  
15 to go to the binary for each of the indicators.

16 Q. So you're saying here under oath that you  
17 evaluated whether or not to do a gradated approach and  
18 determined not to do it and instead use a binary  
19 approach; is that right?

20 A. Yes.

21 Q. That's your testimony that that happened?

22 A. Did what happen?

23 Q. Did you really evaluate whether to do a  
24 gradated approach and then convert to a binary  
25 approach?

1           A.     The conversion is lost on me.  What do you  
2     mean by conversion?

3           Q.     I'm reacting to your testimony, sir.

4                     Did you at one point in time say, "I'm going  
5     to grade these, give them numbers and rank them," and  
6     then determined, "No, it's not appropriate here.  I'm  
7     going to do something else."

8                     Did that really happen?

9           MR. LEVINE:  Objection, Your Honor.

10          THE WITNESS:  No, that's not what happened.

11          THE COURT:  Mr. Levine.

12          MR. LEVINE:  Vague.

13          MR. CHAREST:  So did or did not happen --

14          THE COURT:  Just a moment.  I think that  
15     question is allowable given the context that was  
16     provided by the prior questions and answers.  So the  
17     objection is overruled.

18          MR. CHAREST:  Thank you, sir.

19     BY MR. CHAREST:

20          Q.     So I'm confused because about three questions  
21     ago you said that's exactly what you did and now you're  
22     saying you didn't do it.

23          A.     It's exactly what I did?  I'm missing my  
24     terms to what I conveyed to you.

25          Q.     Okay.  One of us is misunderstanding each

1 other or --

2 A. But -- but my answer is, as a practitioner of  
3 multiattribute decision modeling and working with this  
4 and writing about it, when -- you don't start off with  
5 a decision. You evaluate the information that's there.  
6 Then you make a decision on the appropriateness of the  
7 methodology you're going to use for your decision  
8 modeling. And in this case the decision modeling was  
9 binary.

10 Q. And you did or did not evaluate doing a  
11 gradated ranking system first and then abandon that in  
12 favor of a binary view?

13 A. Well --

14 Q. Which one was it?

15 A. Well, when you say "abandoned," means I  
16 accepted. What I said is I evaluated how I would do  
17 that, and I determined that the appropriate one for  
18 this was binary.

19 Q. That's your final answer?

20 A. Is that my final answer?

21 Q. Yes, sir.

22 A. Yes.

23 Q. We'll stick with that, then.

24 So you made no evaluation of relative  
25 flood-proneness as to any of the test properties;

1 right?

2 A. Comparing test property A to B?

3 Q. Yes, sir.

4 A. No, I did not.

5 Q. So you have no view as to one -- if one is  
6 just barely flood-prone and one is very, very  
7 flood-prone; they're all just going to be called  
8 flood-prone under your analysis; right?

9 A. Certainly. If you're making a decision --  
10 and I said that the flood-prone is an independent  
11 analysis of each one, in this case, with a binary  
12 decision.

13 Q. Can you have a property being just barely  
14 flood-prone and still qualify?

15 A. Still qualify for what?

16 Q. As flood-prone.

17 A. Yes.

18 Q. So what -- what's the standard that you're  
19 measuring to determine whether that particular property  
20 got over the hump to be flood-prone? What's the thing  
21 that you're comparing to?

22 A. As Mr. Fitzgerald indicated today, you're  
23 either -- if you're advising somebody, giving an  
24 opinion on something, and you are dealing with the  
25 issue of flood-proneness, being a little flood-prone or

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1 a lot flood-prone doesn't make any difference. If  
2 there's a possibility, there's a probability that  
3 you're going to flood, that information needs to be  
4 portrayed in that line -- you are flood-prone or you're  
5 not.

6 Q. So you can't be a little flood-prone?  
7 Because that's not what you just said three questions  
8 ago now.

9 A. You can't be a little flood-prone? No.

10 Q. Let's focus on that question I have asked you  
11 and still don't have an answer yet.

12 What are you measuring that against to  
13 determine that this qualifies as flood-prone?

14 A. This -- if there is a possibility or  
15 probability that that property or that location will be  
16 receiving floodwaters.

17 Q. That's -- that's it? And that's not any kind  
18 of --

19 A. Will be flooded.

20 Q. But you don't do any math to support that, do  
21 you? I mean, you do this probability analysis that  
22 you're talking about?

23 A. I defined flood-proneness as the  
24 vulnerability to, or some people use the probability  
25 of, but the vulnerability to flooding. And when I say

1 something is flood-prone, I say in the opinion or based  
2 on my analysis there is a vulnerability to flooding  
3 when it's labeled "flood-prone," whether it's a little  
4 or a lot, whether it has many indicators or a few.

5 Q. Well, labeling something flood-prone doesn't  
6 make it flood-prone. I would think that, first, you  
7 would determine, is it flood-prone? And then you would  
8 label it flood-prone; correct?

9 A. What do you mean by something is flood-prone,  
10 you have to decide whether it is flood-prone?

11 Q. I'm completely flummoxed here.  
12 When you first looked at the first test  
13 property, did you think "I don't know" or did you think  
14 "I know"? Before you went to any data at all, just the  
15 address.

16 A. You go in with an assumption that you're  
17 looking at property and you know nothing.

18 Q. Okay. And then you learn what you learn;  
19 right?

20 A. That's correct.

21 Q. And then you compare it to some standard to  
22 determine, yes, it's flood-prone or, no, it's not  
23 flood-prone; right?

24 A. Yes.

25 Q. What is that standard, sir?



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1           A.     Well, there are several characteristics and  
2     several indicators. And you can judge on there. Is  
3     there a -- what you'd call sufficient number of  
4     indicators to indicate that that is a factor that must  
5     be considered.

6           Q.     How many are sufficient?

7           A.     Depends on which one you're talking about.

8           Q.     What does it depend on?

9           A.     If we -- let's take the case of an indicator  
10    that says information available concerning the previous  
11    flooding. Is there one? two? three? It does not  
12    matter. It indicates that you've got one that said  
13    previously flooding. In that particular case, that  
14    would be a strong indicator.

15          Q.     And what about places that never had flooding  
16    before, sir?

17                 I mean, I'm still trying to find out what is  
18    the thing you're measuring against? Because the  
19    purpose of going through this process is to understand  
20    whether or not what you're doing is repeatable, whether  
21    it's testable by somebody else. Or is it just you  
22    saying "I think it is." And I am just trying to  
23    understand how you can show me it's not just you saying  
24    "I think it is."

25          A.     It's -- it's, in my opinion, very repeatable.

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1 And it's using terms and items that are in common use  
2 in this profession. Is the area located in something  
3 that's been defined by the federal government as a  
4 hazard area? That's very simple to look at. And  
5 that's relatively straightforward. Others are not as  
6 straightforward as that.

7 Q. Did each of the test properties have variable  
8 in terms of they're not all identical indicators of  
9 flood-proneness?

10 A. Each of them was looked at with the complete  
11 list of characteristics and indicators that I had.

12 Q. And did each of them have identical or  
13 different indicators?

14 A. They had the same indicators. I examined the  
15 same indicators and the same characteristics for all  
16 properties.

17 Q. Not every one of them flooded before, have  
18 they, sir?

19 A. No.

20 Q. So not all of them had the same indicators;  
21 right?

22 A. Well, you're saying the same result. As I --  
23 the methodology specifies indicators and  
24 characteristics, characteristics being natural physical  
25 things that you can see and indicators being things

1 that are available for you to learn. And each of them  
2 has their own specific answers to each of the questions  
3 that deals with that.

4 Q. And as to each of them, you had the same  
5 exact conclusion; right? Literally, the same words?

6 A. I'm sorry. I'm missing something in -- if  
7 you are taking the sum, the conclusion overall, yes.  
8 If you're taking the individual assessments, each  
9 assessment differed.

10 Q. Is it true -- I want to talk about a slightly  
11 different thing. I'm just going to bookmark it so  
12 everybody knows what we're talking about. I want to  
13 talk about fit, how these opinions you're trying to  
14 offer fit in this case.

15 So here's my question to you. In connection  
16 with your work on this engagement, did you consider  
17 whether or not the Corps of Engineers' use and  
18 operation of Addicks and Barker dams to impound a  
19 runoff was a potential source of a flood hazard in the  
20 upstream area?

21 A. Go through the first part of that question.

22 Q. In connection with your work on this  
23 engagement, did you consider whether or not the Corps  
24 of Engineers' use and operations of the Addicks and  
25 Barker dams to impound a runoff was a potential source

1 of the flood hazard in the upstream areas?

2 A. That was not an indicator that was on my  
3 list.

4 Q. So the indicators you're talking about are  
5 things other than the Addicks and Barker dams; right?

6 A. The indicators did not include the Addicks  
7 and Barker dam. It included the hazard, the source of  
8 the waters.

9 Q. But -- so the test property owners' awareness  
10 of the Addicks and Barker dams was not something that  
11 you thought they should have been aware of vis-a-vis an  
12 indicator for what was available to them at the time  
13 they purchased the property; correct?

14 A. I most certainly did.

15 Q. Do you agree with me that you did not  
16 consider whether or not the Addicks and Barker dams --  
17 you did not consider them as a source of the flood  
18 hazard in the upstream areas; right?

19 A. I did not specifically consider -- well,  
20 you're defining a condition that I am not familiar with  
21 or at least I -- you haven't given me enough  
22 information to deal with, and that's not in my area of  
23 expertise for this particular issue.

24 I have said that waters that come on the  
25 property are coming from rainfall or coming from the

1 streams that -- that flow by and they can -- they can  
2 come by from the pool of Addicks and Barker.

3 Q. But you did not look to see whether the  
4 existence of the Addicks and Barker dam embankments  
5 increased the risk of flood-proneness in the upstream  
6 areas, did you, sir?

7 A. I did not have to do that. That was not one  
8 of the -- that's a hydrologic analysis. I did not do a  
9 hydrologic analysis.

10 Q. So to be clear, your analysis did not include  
11 the risk of flood -- the increased risk of  
12 flood-proneness as a result of the Addicks and Barker  
13 dams?

14 A. My analysis did not include risk of anything.  
15 Risk -- risk gets involved into defining of  
16 consequences. And we're talking about something --  
17 we're talking about proneness and not risk. And that's  
18 a fundamental.

19 Q. Proneness is different than risk, you say?

20 A. It is.

21 Q. How?

22 A. In the literature, in the profession, risk is  
23 the taking of the physical problems with flooding, the  
24 flood source, the flooding that is occurring, and  
25 applying to it, with it, the product of the economic,

1 social, and cultural consequences, environmental  
2 consequences, to create the risk.

3 That's the definition that's in use in the  
4 profession, in the community, in the government. And I  
5 did not become involved in looking at impacts of any  
6 properties, any of the 13 properties. And so I did not  
7 do any risk analysis.

8 Q. Are the places that you looked at, the test  
9 properties, more or less flood-prone as a result of  
10 being near the Addicks and Barker dams?

11 A. They are flood-prone in the sense that they  
12 are in the designated pool, indicated on the U.S.  
13 geologic survey maps.

14 Q. Aren't they flood-prone because of the dams  
15 themselves, not because of being on a map?

16 A. I -- again, you're looking at what is the  
17 circumstances in a Harvey-like event that creates this.  
18 And I was not in the position of trying to evaluate  
19 what was the cause of the particular flooding of a  
20 particular property amongst the many that are  
21 available.

22 Q. That's not what I asked you, sir.

23 A. Ask again, then.

24 Q. Aren't the homes more flood-prone because of  
25 the Addicks and Barker?

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1 A. Under what conditions?

2 Q. Conditions like Harvey you said is what you  
3 studied.

4 A. A Harvey-like event? I don't know the answer  
5 to that, and I haven't seen the answer portrayed.

6 MR. CHAREST: Your Honor, that's the last  
7 question I have. I think that the expert -- the  
8 purported expert both -- well, he's never been  
9 qualified. He's been stricken without telling us.  
10 He -- it's pure ipse dixit. There is no fit. He  
11 should not be qualified as an expert under 702, sir.

12 THE COURT: Mr. Levine, the Court has a set  
13 of questions, but why don't you carry forward with more  
14 voir dire.

15 MR. LEVINE: Thank you, Your Honor.

16 THE COURT: The Court would be interested in  
17 learning what these indicia actually are if no  
18 hydraulic analysis was performed.

19 MR. LEVINE: Thank you, Your Honor. I'd be  
20 happy to go through that.

21 THE COURT: Let's do that.

22 DIRECT EXAMINATION (Continued)

23 BY MR. LEVINE:

24 Q. So, Dr. Galloway, I want to look at Figure 1  
25 from your report. And we're going to put up on the

1 poster board --

2 MR. LEVINE: That's just a replication of  
3 Figure 1 from the report, Your Honor, and that's found  
4 on -- on page 16 of Dr. Galloway's report.

5 THE COURT: Yeah.

6 MR. CHAREST: Are we doing more  
7 qualifications, or are we into opinion now?

8 THE COURT: This is still voir dire.

9 MR. CHAREST: Thank you, sir.

10 BY MR. LEVINE:

11 Q. So, Dr. Galloway, you explained that you  
12 considered characteristics and indicators, Figure 1.

13 What is Figure 1?

14 A. Figure 1 is how characteristics fit into the  
15 definition of flood-proneness.

16 Q. Okay.

17 A. On the right side, Your Honor, you see a --  
18 an approach found in the current European and in the  
19 textbook that I mentioned that was done for UNESCO on  
20 dealing with flood-risk strategies.

21 Flood hazard is at the top of that. That's  
22 where you get the water that creates the flood. The  
23 pathway is how it goes from that source, whether the  
24 air or river, to the exposed property, the receptor.  
25 And each -- in each of those, flood hazard and pathway



1 and exposure, there are characteristics that can be  
2 ascertained and that give an indication of the relative  
3 flood-proneness.

4 All those together help define  
5 flood-proneness. When you add the consequences, the  
6 impacts, in the profession, it then becomes the risk.

7 Q. And, Dr. Galloway, I see under the dashed  
8 line "Consequences and Risk."

9 Did you do an analysis of consequences and  
10 risk here?

11 A. I did not.

12 Q. Okay. So what characteristics are included  
13 in flood hazard?

14 A. Flood hazard is the source, the primary  
15 source of the flooding. In this particular region,  
16 that is rainfall events, it's river rises, it's  
17 surge -- sea level rise would not be appropriate -- and  
18 changes in weather that might occur that would have an  
19 impact on the volume and intensity.

20 Q. Okay. And, Dr. Galloway, what  
21 characteristics are included in pathway?

22 A. The pathway, Your Honor, is the land over  
23 which it travels and the items that are there. Clear  
24 on topography is the shape of the land. Is it flat or  
25 is it one that's going to have very fast runoff, as you

1 would have in an Alpine or a hilly area?

2 It would also include drainage features which  
3 are a supplement to the natural drainage of the system,  
4 both natural and constructed types of features; the  
5 land cover, what's on the land that causes the runoff  
6 to be slight or heavy; protection, which is what  
7 structures have been put in place to prevent flooding  
8 from taking place.

9 Q. Okay. And what's exposure?

10 A. Exposure is how high you are, what's the  
11 chance that you're -- if you're low, obviously, in an  
12 area near a stream, you have a greater probability of  
13 hitting flooding than if you're up several feet in the  
14 air.

15 You can also be in a location where you're at  
16 the junction of multiple streams. That's a position  
17 that is -- puts you at exposure. Clearly, if you're  
18 moved out of the area or you're very high, your  
19 exposure is reduced and your -- the probability of  
20 flooding is less.

21 So these three -- flood hazard, pathway,  
22 exposure -- define the probability of you being  
23 flooded. What happens with that is the consequences  
24 and the risk.

25 Q. Okay. And, most recently, where did you

1     derive this figure from? Like, what was your most  
2     recent work where you derived this work?

3           A.     Well, we used the -- this came out of the  
4     UNESCO report out of previous reports that came from  
5     the European community in dealing with their entire  
6     water resources challenges with flooding, and it was  
7     also similar to the approach we took in analyzing the  
8     flooding on the Arno River as it went through Florence,  
9     Italy.

10          Q.     So you've used this type of analysis many  
11     times?

12          A.     I've used it many times. This is the -- what  
13     you need to do is to understand the situation and to  
14     evaluate what the changes are, the possibilities for  
15     change, and the influencers on each of those boxes to  
16     the left.

17          Q.     Okay. And in conducting your analysis here,  
18     did you consider the types of information that you just  
19     described for us with hazards, pathway, and exposure?

20          A.     I did.

21          Q.     Okay. Now I want to introduce Figure 3,  
22     which is the indicators.

23                     Do we have a set -- yeah, the second easel.  
24     Thank you.

25                     And this is a reproduction of Figure 3 from

1 Dr. Galloway's report, which is found on page 24, and  
2 the indicators portion of his methodology is on  
3 pages 23 through 40 of the report.

4 Dr. Galloway, what is Figure 3?

5 A. It is a list of indicators that would lead  
6 you -- assist you in determining whether or not you are  
7 possibly subject to flooding. There are items that are  
8 available to the person -- the layperson and do not  
9 have a scientific or a -- a necessity for scientific  
10 knowledge but are more commonly available to the person  
11 that would be moving or looking at an area.

12 Q. Okay. And did you create Figure 3 for this  
13 report?

14 A. I created Figure 3 by using the commonly used  
15 approaches that I have used in the past. And they're  
16 part of the methodologies used in studies that are  
17 performed for and by the federal government.

18 Q. Was it adapted from anywhere?

19 A. Yes. I chose the ones for this particular  
20 study.

21 Q. Right. When it comes to assessing  
22 flood-proneness, are these the indicators that you and  
23 your colleagues would consider?

24 A. Yes.

25 Q. Okay. Are there other indicators that you

1 could have chosen for this analysis?

2 A. Yes. But they were not applicable, in my  
3 opinion, to this particular case.

4 Q. Okay. So why did you choose the particular  
5 indicators you did?

6 A. Because in this -- because they were the ones  
7 that were most pertinent among many. And I have  
8 learned that an excess number just confuses it. These  
9 are the ones that drive to the central point.

10 Q. So let's look at the indicators of  
11 flood-proneness listed on Figure 3 from your report and  
12 walk through those briefly.

13 Why are physical characteristics an indicator  
14 of flood-proneness?

15 MR. CHAREST: Your Honor, I think we're  
16 getting into -- I mean, I've kind of let it go, but  
17 we're talking about his opinion now, literally --

18 MR. LEVINE: No, we're still on the --

19 THE COURT: I see them -- I see on  
20 Figure 3 -- I have a couple of really basic questions  
21 about this exercise --

22 MR. LEVINE: Please, Your Honor.

23 THE COURT: -- because we've had a lot of  
24 testimony about -- I don't want to charge your time to  
25 you, Mr. Levine, but we've had a lot of testimony about

1 the relative -- relative propensity to flooding; that  
2 is, the susceptibility to flooding based on, for  
3 example, the 100-year flood zone, the 500-year, and so  
4 on and so forth.

5 And you can actually calculate those things  
6 by reference to hydrogeologic -- I think of it as  
7 hydrogeologic -- hydrologic data on past events. To  
8 me, it's all relative. As we've had testimony from  
9 Dr. Bedient and Mr. Nakagaki, Ms. -- Dr. Asche, you can  
10 have something past the 500-year flood line that would  
11 be susceptible to flooding in an extraordinary event  
12 that might occur once every 5,000 years.

13 I just don't see a basis for a binary  
14 approach in this particular set of circumstances. It  
15 just doesn't make any sense.

16 MR. LEVINE: So I -- if -- if I understand  
17 your question, you're asking --

18 THE COURT: It's not a question. I'm asking  
19 you to address the concern I have, which is that a  
20 binary approach just doesn't seem to fit anything in  
21 this particular case.

22 MR. LEVINE: So if I may, Your Honor.

23 THE COURT: Yes.

24 MR. LEVINE: Dr. Galloway's opinion goes to  
25 both character-of-the-land issues and reasonable

1 investment-backed expectations. So, to the extent  
2 there's a question about fit within the factors that  
3 are in play in this case, his work goes to those areas.

4 THE COURT: Well, it might -- you might think  
5 it does, but let's just take -- for example, it seems  
6 to me that what we're really talking about is hydrology  
7 and hydraulics. And I just don't see anything like  
8 hydrology and hydraulics in this particular analysis or  
9 report by Dr. Galloway.

10 MR. LEVINE: That's correct, Your Honor.  
11 Dr. Galloway is -- we're not seeking to enter him as an  
12 expert in hydrology and hydraulics. The United States  
13 has experts in that area.

14 THE COURT: Well, let's hear from them in due  
15 course. I just don't see how you can address  
16 flood-proneness without addressing hydrology and  
17 hydraulics. It's just not possible.

18 MR. LEVINE: Your Honor, I think the -- the  
19 work that Dr. Galloway did does address flood-proneness  
20 as he's explained it.

21 Again, there's a difference between proneness  
22 and risk. And Dr. Galloway explained that difference.  
23 Perhaps the way the term "risk" is used commonly is  
24 causing some confusion here versus, you know --

25 THE COURT: It's not confusion.

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1 MR. LEVINE: Sir, if I may?

2 THE COURT: Yes.

3 MR. LEVINE: Reasonable investment-backed  
4 expectations is an objective standard.

5 THE COURT: That's correct.

6 MR. LEVINE: Okay. Thank you.

7 The analysis that Dr. Galloway did  
8 considering these indicators that are on the screen --

9 THE COURT: Right.

10 MR. LEVINE: -- these are indicators that are  
11 available to laypeople that they could consider when  
12 making a decision such as purchasing property.

13 THE COURT: We've had a fair amount of  
14 testimony on that particular subject. In fact, all of  
15 the test property owners basically testified about  
16 that. And we had testimony from officials at Fort Bend  
17 County and Harris County on those particular subjects,  
18 and the Corps.

19 MR. LEVINE: Yes, Your Honor. We have had  
20 testimony on that. What Dr. Galloway's testimony  
21 provides is opinions related to whether or not there  
22 were indicators -- first, whether or not a property was  
23 flood-prone; and, secondly, whether or not indicators  
24 were available to a person at the time they purchased  
25 their property to be aware that they could flood in a



1 Hurricane Harvey-like event.

2 THE COURT: Let me just say that the Court's  
3 inclination -- and I'd like to sleep on it overnight.  
4 But the Court's inclination is not to allow  
5 Dr. Galloway to testify as an expert because I don't  
6 think there's a scientific basis for his testimony.

7 On the other hand, I am willing to allow the  
8 government to make a proffer of Dr. Galloway's  
9 testimony. You understand what I'm saying?

10 MR. LEVINE: I do understand what you're  
11 saying, Your Honor. And, if I may, could -- could we  
12 finish, in the morning, presenting the indicators?

13 THE COURT: Yes. Well, I thought we had. I  
14 mean, we looked at them.

15 MR. LEVINE: We looked at the headings.  
16 Dr. Galloway didn't have a chance to explain to you  
17 what they are and why they're important.

18 THE COURT: That -- that is definitely  
19 allowable. And, in fact, that could be part of your  
20 proffer, but -- and I will allow you -- you can take  
21 your time to make your proffer.

22 And the Court will definitely allow it  
23 because this is the kind of case where a proffer is  
24 fully appropriate given the set of circumstances all  
25 the parties are in.

1 MR. LEVINE: I'm sorry, Your Honor. Are you  
2 asking me a question, Your Honor?

3 THE COURT: No, I -- I'm just saying, are you  
4 willing to take the time to make that proffer? I'm  
5 willing to allow it.

6 MR. LEVINE: Is Your Honor ruling at this  
7 time? I thought you said you wanted to sleep on it and  
8 reserve --

9 THE COURT: I do.

10 MR. LEVINE: -- and rule in the morning.

11 THE COURT: I would like to revisit it  
12 tomorrow morning, but you've basically -- you've heard  
13 at least my tentative decision.

14 MR. LEVINE: I -- I understand, Your Honor.  
15 And I think we'll be happy to address what you're  
16 thinking in the morning.

17 THE COURT: And the reason I did that is to  
18 allow everyone to not only sleep on it overnight, but  
19 to prepare for what you're going to do one way or the  
20 other.

21 MR. LEVINE: I understand, Your Honor. Thank  
22 you.

23 THE COURT: I guess, you know, we do have  
24 limited time.

25 Mr. Charest, do you have comments?

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1 MR. CHAREST: I'm standing by, sir. I was  
2 going to suggest, if the Court was done, we could be  
3 done. If the Court wants to start the proffer now, we  
4 could do that too. Whatever you like.

5 THE COURT: Well, I'm a little reluctant to  
6 do that because there really hasn't been thought given  
7 to a preparation as to how the proffer would be  
8 accomplished.

9 MR. CHAREST: Fair enough.

10 THE COURT: It might be accomplished through  
11 Dr. Galloway's testimony. And the Court is willing to  
12 go so far as to allow that.

13 You understand, Mr. Levine?

14 MR. LEVINE: As I understood it, Your Honor.

15 THE COURT: The Court can allow a proffer  
16 through testimony.

17 MR. LEVINE: Yes, Your Honor. I -- I do  
18 understand procedurally what you're describing.

19 As -- as Your Honor indicated, if we could  
20 sleep on it and I'll come back in the morning and  
21 address this, I think that would be appropriate.

22 THE COURT: That would be a good idea all the  
23 way around.

24 MR. LEVINE: Thank you, Your Honor.

25 THE COURT: All right. Let's just have the

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1 time -- given all the circumstances, let's just have  
2 the time for the record.

3 THE CLERK: Yeah. The plaintiffs are at  
4 2618, and the government is at 2116.

5 THE COURT: All right. Government -- I'm  
6 sorry -- defense is at what?

7 THE CLERK: 2116.

8 THE COURT: 2618 for plaintiffs, and 2116 for  
9 the defense.

10 Dr. Galloway, I look forward to seeing you  
11 tomorrow morning.

12 And, Mr. Levine and Mr. Charest and everyone,  
13 we will entertain these -- these fascinating subjects  
14 tomorrow morning. Thank you.

15 MR. LEVINE: Thank you, Your Honor.

16 THE CLERK: All rise. Court is in recess.

17 (Thereupon, the proceedings  
18 concluded at 5:30 p.m.)

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1 CERTIFICATE OF TRANSCRIBER

2

3 I, Kristy L. Clark, court-approved transcriber,  
4 certify that the foregoing is a correct transcript from  
5 the official electronic sound recording of the  
6 proceedings in the above-titled matter.

7

8

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10 DATE: 5/16/19

11 KRISTY L. CLARK, RPR

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	JX	PAGE	DESCRIPTION
1			ADMITTED EXHIBITS
2			
3	JX	PAGE	DESCRIPTION
4	54	2401	5/1/1996 Harris County Flood Control
5			District, Katy Freeway Corridor Flood
6			Control Study
7	60	2404	3/1/2000 Feasibility Study for
8			Improvements to Addicks and Barker,
9			March 2000
10	88	2407	2/1/2008 ABECT Planning/Exercise
11			related to rising reservoir pool
12			Levels
13	146	2429	Email from Michael Kauffman regarding
14			CWMS Forecast for 08/25/2017-
15			09/24/2017
16	266	2295	USGS Maps of Plaintiffs' properties
17			(showing location of Burnham,
18			Stewart, Sidhu, Turney, West Houston
19			Airport, Holland, and Popovici
20			properties)
21	267	2295	USGS Maps of Plaintiffs' properties
22			(showing location of Burnham,
23			Stewart, Sidhu, Turney, West Houston
24			Airport, Holland, and Popovici
25			properties)

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1	268	2295	USGS Maps of Plaintiffs' properties
2			(showing location of Burnham, Stewart,
3			Sidhu, Turney, West Houston Airport,
4			Holland, and Popovici properties)
5	269	2295	USGS Map of Plaintiffs' properties,
6			Addicks, TX, 2016 (showing location
7			of Burnham, Stewart, Sidhu, Turney,
8			West Houston Airport, Holland, and
9			Popovici properties)
10	271	2298	USGS Map of Plaintiffs' properties,
11			Clodine, TX, 1970 (showing location
12			of Soares, Banker, and Micu
13			properties)
14	272	2298	USGS Map of Plaintiffs' properties,
15			Clodine, TX, 1982 (showing location
16			of Soares, Banker, and Micu
17			properties)
18	273	2298	USGS Map of Plaintiffs' properties,
19			Clodine, TX, 1995 (showing location
20			of Soares, Banker, and Micu
21			properties)
22	274	2298	USGS Map of Plaintiffs' properties,
23			Clodine, TX, 2016 (showing location
24			of Soares, Banker, and Micu
25			properties)

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1	276	2296	USGS Map of Hedwig Village, TX,
2			Harris County, 1970 (showing location
3			of Lakes on Eldridge and Wind
4			properties)
5	277	2296	USGS Map of Hedwig Village TX, Harris
6			County, 1982 (showing location of
7			Lakes on Eldridge and Wind
8			properties)
9	278	2296	USGS Map of Hedwig Village, TX,
10			Harris County, 1995 (showing location
11			of Lakes on Eldridge and Wind
12			properties)
13	279	2296	USGS Map of Hedwig Village, TX,
14			Harris County, 2016 (showing location
15			of Lakes on Eldridge and Wind
16			properties)
17	280	2301	USGS Map of Richmond NE Quadrangle,
18			TX, 1971 (showing location of Giron
19			property)
20	281	2301	USGS Map of Richmond, NE Quadrangle,
21			TX, 1971 (Photorevised 1980) (showing
22			location of Giron property)
23	282	2301	USGS Map of Richmond, NE Quadrangle,
24			TX, 2016 (showing location of Giron
25			property)



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1	283	2363	FEMA Flood Insurance Rate Maps
2			(FIRMs) - Giron Property
3	284	2364	FEMA Flood Insurance Rate Maps
4			(FIRMs) - Holland Property
5	285	2365	FEMA Flood Insurance Rate Maps
6			(FIRMs) - Lakes on Eldridge Property
7	286	2360	FEMA Flood Insurance Rate Maps
8			(FIRMs) - Micu Property
9	287	2366	FEMA Flood Insurance Rate Maps
10			(FIRMs) - Popovici Property
11	288	2367	FEMA Flood Insurance Rate Maps
12			(FIRMs) - Sidhu Property
13	289	2368	FEMA Flood Insurance Rate Maps
14			(FIRMs) - Soares Property
15			
16	PX	PAGE	DESCRIPTION
17	138	2175	USGS Characterization of Peak
18			Streamflows
19	139	2176	Map with Gage Locations
20	2205	2250	11/5/2018 Deal Sikes Expert Report
21			
22	DX	PAGE	DESCRIPTION
23	42	2285	3/16/1971 USGS Field notes, Addicks
24			Reservoir
25			

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1	194	2416	03/13/2009 Addicks and Barker
2			Emergency Coordination Team (ABECT)
3			Meeting agenda and related documents
4	340	2433	08/26/2017 Email from M. Kauffman
5			regarding CWMS Forecast for 08/26 -
6			09/24, 2017
7	360	2437	08/27/2017 Email from M. Kauffman
8			regarding CWMS Forecast for 08/27 -
9			09/24/2017
10	384	2439	08/28/2017 Email from M. Kauffman
11			regarding CWMS Forecast for 08/27 -
12			09/24/2017
13	396	2442	08/29/2017 Email from Justice
14			regarding CWMS Forecast for 08/29 -
15			09/24/2017
16	415	2443	08/30/2017 Email from M. Kauffman
17			regarding CWMS Forecast for 08/30 -
18			09/24/2017
19	427	2445	08/31/2017 Email from M. Kauffman
20			regarding CWMS Forecast for 08/31 -
21			09/24/2017
22	698	2282	USGS Topographic Map Symbols
23	741	2271	USGS Addicks and Barker map
24	744	2271	USGS Addicks Quadrangle map 1970
25	745	2271	USGS Addicks Quadrangle map 1980

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1	747	2271	USGS Addicks Quadrangle map 2016
2	749	2290	USGS Clodine Quadrangle map 1995
3	752	2290	USGS Clodine Quadrangle map 1970
4	753	2290	USGS Clodine Quadrangle map 1982
5	754	2290	MAP - USGS Topographical Map: Clodine
6			Quadrangle, TX, 7.5-Minute Series;
7			2016; (NGA REF NO. USGSX24K9246)
8	756	2288	MAP - USGS Topographical Map: Hedwig
9			Village Quadrangle, TX - Harris Co.,
10			7.5-Minute Series; 1970;
11			(N2945-W9530)
12	757	2288	MAP - USGS Topographical Map: Hedwig
13			Village Quadrangle - Harris Co., TX,
14			7.5-Minute Series; 1982;
15			(N2945-W9530/7.5)
16	758	2288	MAP - USGS Topographical Map: Hedwig
17			Village Quadrangle - Harris Co., TX,
18			7.5-Minute Series; 1995
19	759	2288	MAP - USGS Topographical Map: Hedwig
20			Village Quadrangle - Harris Co., TX,
21			7.5-Minute Series; 2016; (NGA REF NO.
22			USGSX24K19987)
23	806	2361	FEMA Flood Insurance Rate Maps
24			(FIRMs) - Banker Property
25			

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1	807	2362	FEMA Flood Insurance Rate Maps
2			(FIRMs) - Burnham Property
3	815	2369	FEMA Flood Insurance Rate Maps
4			(FIRMs) - Stewart Property
5	816	2372	FEMA Flood Insurance Rate Maps
6			(FIRMs) - Turney Property
7	817	2371	FEMA Flood Insurance Rate Maps
8			(FIRMs) - West Houston Airport Corp.
9			Property
10	818	2373	FEMA Flood Insurance Rate Maps
11			(FIRMs) - Wind Property
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